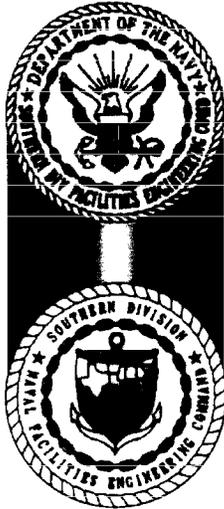


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PHASE II INTERIM MEASURE WORK PLAN FOR GROUNDWATER SOURCE AREA
REMEDATION SOLID WASTE MANAGEMENT UNIT 39 (SWMU 39)
ZONE A CNC CHARLESTON SC
3/25/2004
CH2M HILL

INTERIM MEASURE WORK PLAN

Phase II - Groundwater Source Area Remediation - SWMU 39, Zone A



**Charleston Naval Complex
North Charleston, South Carolina**

SUBMITTED TO
**U.S. Navy Southern Division
Naval Facilities Engineering Command**

CH2M-Jones

March 2004

Contract N62467-99-C-0960



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March 25, 2004

Mr. David Scaturo
South Carolina Department of Health and
Environmental Control
Bureau of Land and Waste Management
2600 Bull Street
Columbia, SC 29201

Re: Interim Measure Work Plan Phase II – Groundwater Source Area Remediation
(Revision 0) – SWMU 39, Zone A

Dear Mr. Scaturo:

Enclosed please find two copies of the Interim Measure Work Plan Phase II Groundwater Source Area Remediation (Revision 0) for SWMU 39 in Zone A of the Charleston Naval Complex (CNC). This report has been prepared pursuant to agreements by the CNC BRAC Cleanup Team for completing the RCRA Corrective Action process.

The principal author of this document is Casey Hudson. Please contact him at 407/423-0030, ext. 251, if you have any questions or comments.

Sincerely,

CH2M HILL

A handwritten signature in black ink that reads "Dean Williamson".

Dean Williamson, P.E.

cc: Dann Spariosu/USEPA, w/att
Rob Harrell/Navy, w/att
Gary Foster/CH2M HILL, w/att

INTERIM MEASURE WORK PLAN

Phase II - Groundwater Source Area Remediation - SWMU 39, Zone A



***Charleston Naval Complex
North Charleston, South Carolina***

SUBMITTED TO
***U.S. Navy Southern Division
Naval Facilities Engineering Command***

PREPARED BY
CH2M-Jones

March 2004

*Revision 0
Contract N62467-99-C-0960
158814.ZA.EX.01*

**Certification Page for the Phase II – Source Area Interim
Measure Work Plan (Revision 0) — SWMU 39, Zone A**

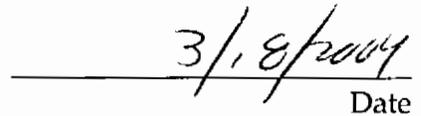
I, Dean Williamson, certify that this report has been prepared under my direct supervision. The data and information are, to the best of my knowledge, accurate and correct, and the report has been prepared in accordance with current standards of practice for engineering.

South Carolina

P.E. No. 21428



Dean Williamson, P.E.



Date

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1 **Acronyms and Abbreviations**

2	ARS	ARS Technologies, Inc.
3	BCT	BRAC Cleanup Team
4	BRAC	Base Realignment and Closure Act
5	CMS	corrective measures study
6	CNC	Charleston Naval Complex
7	COC	chemical of concern
8	CSAP	Comprehensive Sampling and Analysis Plan
9	CVOC	chlorinated volatile organic compound
10	DCE	dichloroethene
11	DMP	Data Management Plan
12	DO	dissolved oxygen
13	DPT	direct-push technology
14	EnSafe	EnSafe Inc.
15	EPA	U.S. Environmental Protection Agency
16	ft	feet
17	ft bls	feet below land surface
18	HASP	Site-Specific Health and Safety Plan
19	IDW	investigation-derived waste
20	IM	interim measure
21	IMWP	interim measure work plan
22	ISCR	in situ chemical reduction
23	LAI	Liquid Atomized Injection
24	MNA	Monitored Natural Attenuation
25	MSDS	Material Safety Data Sheet
26	µg/L	micrograms per liter
27	mg/L	milligrams per liter
28	OD	outer drive
29	ORP	oxidation-reduction potential

1 **Acronyms and Abbreviations**

2	PF	pneumatic fracturing
3	POL	petroleum, oil, and lubricant
4	PPE	personal protective equipment
5	psig	pounds per square inch per gauge
6	QAP	Quality Assurance Plan
7	SCDHEC	South Carolina Department of Health and Environmental Control
8	SWMU	solid waste management unit
9	TCE	trichloroethene
10	TTA	target treatment area
11	TTI	targeted treatment intervals
12	UIC	underground injection control
13	VC	vinyl chloride
14	VOC	volatile organic compound
15	ZVI	zero-valent iron

Section 1.0

1.0 Introduction

1.1 Purpose and Objectives of the Phase II Interim Measure Work Plan

This Phase II Interim Measure Work Plan (IMWP) has been prepared by CH2M-Jones to document the basis for a Source Area Interim Measure (IM) to be conducted at Solid Waste Management Unit (SWMU) 39 and downgradient areas within Zone A of the CNC. The location of the SWMU 39 area within the CNC is presented in Figure 1-1. Figure 1-2 shows the general layout of the SWMU 39 area.

The goal of this IM is to remediate the groundwater contamination source areas identified near SWMU 39, which are contaminated primarily with trichloroethene (TCE) and 1,2-dichloroethene (DCE). The Target Treatment Areas (TTAs) to be addressed in this IM were determined based on the results of the recently completed Phase I IM source delineation activities, which are also described herein.

This IMWP describes the general technical approach and procedures to be employed for achieving in situ chemical reduction (ISCR) of the volatile organic compounds (VOCs) by use of powdered zero-valent iron (ZVI). The ZVI will be introduced to the subsurface via a patented process that uses pneumatic fracturing (PF). Minor variations to the technical approach and procedures outlined in this IMWP may be warranted based on subsurface conditions observed during installation of the PF borings. These variations, if any, and the reasons for such variations will be documented in the IM Completion report.

1.2 Organization of the Phase II IMWP

This Phase II IMWP consists of the following sections, including this introductory section:

1.0 Introduction – Presents the purpose of the work plan and background information related to the proposed investigation.

2.0 Site Background and Previous Investigations – Provides the site background and a brief summary of previous investigations, including the recent source area delineation direct-push technology (DPT) investigation.

- 1 **3.0 Technical Approach** – Describes the rationale behind the TTA delineation, the selected
- 2 treatment technology, and the technical approach for completing source area remediation at
- 3 SWMU 39.

- 4 **4.0 Investigation-Derived Waste** – Describes the procedures to be implemented for
- 5 management of the investigation-derived waste (IDW).

- 6 **5.0 Project Schedule** – Provides a detailed outline of the schedule to be implemented during
- 7 the remediation.

- 8 **6.0 References** – Lists the references used in this document.

- 9 **Appendix A** – Presents Source Delineation DPT Groundwater Analytical Data.

- 10 **Appendix B** – Contains a material safety data sheet (MSDS) for the ZVI powder, which will
- 11 be used in the pilot study and subsequent full-scale remediation.

- 12 All tables and figures appear at the end of their respective sections.

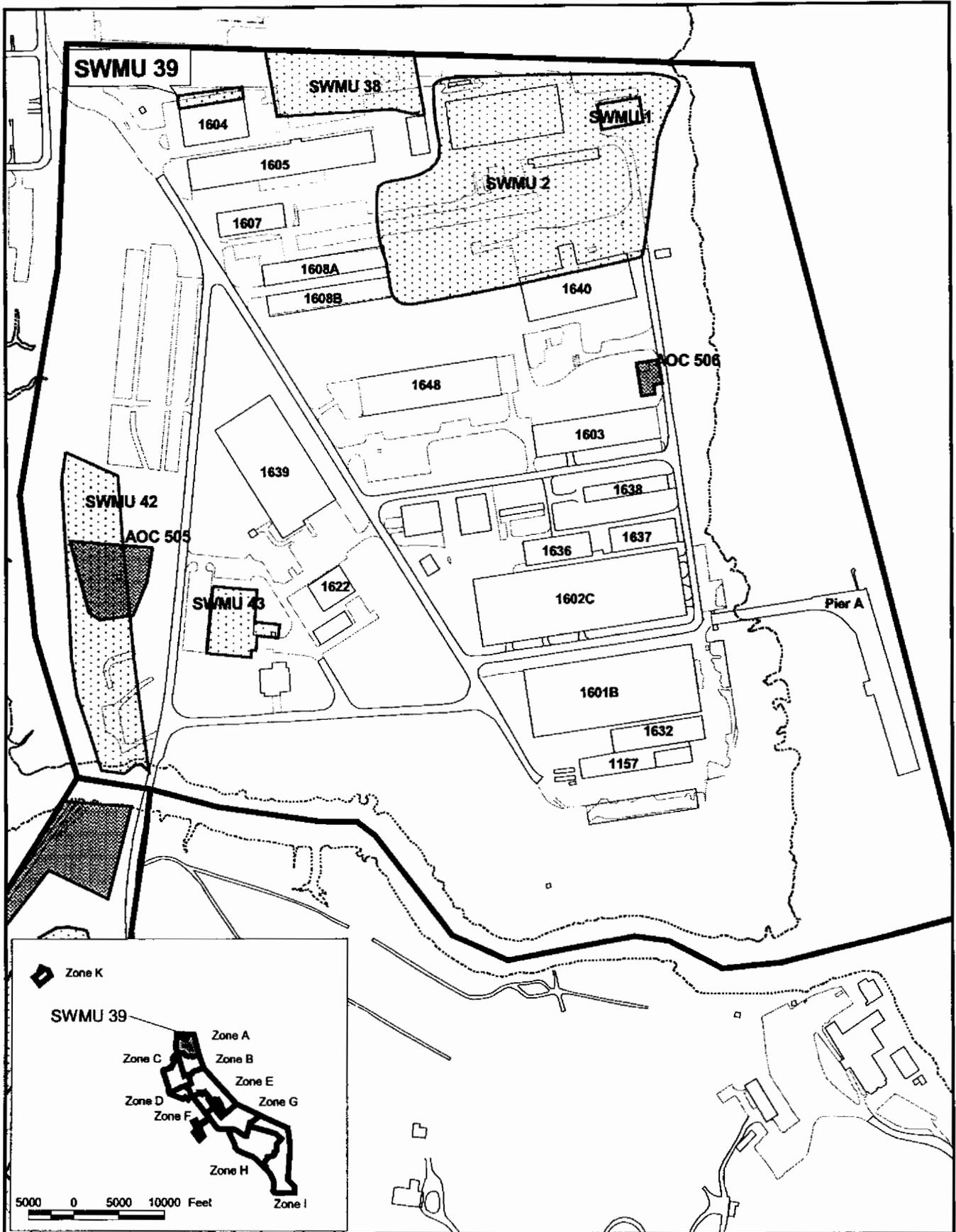
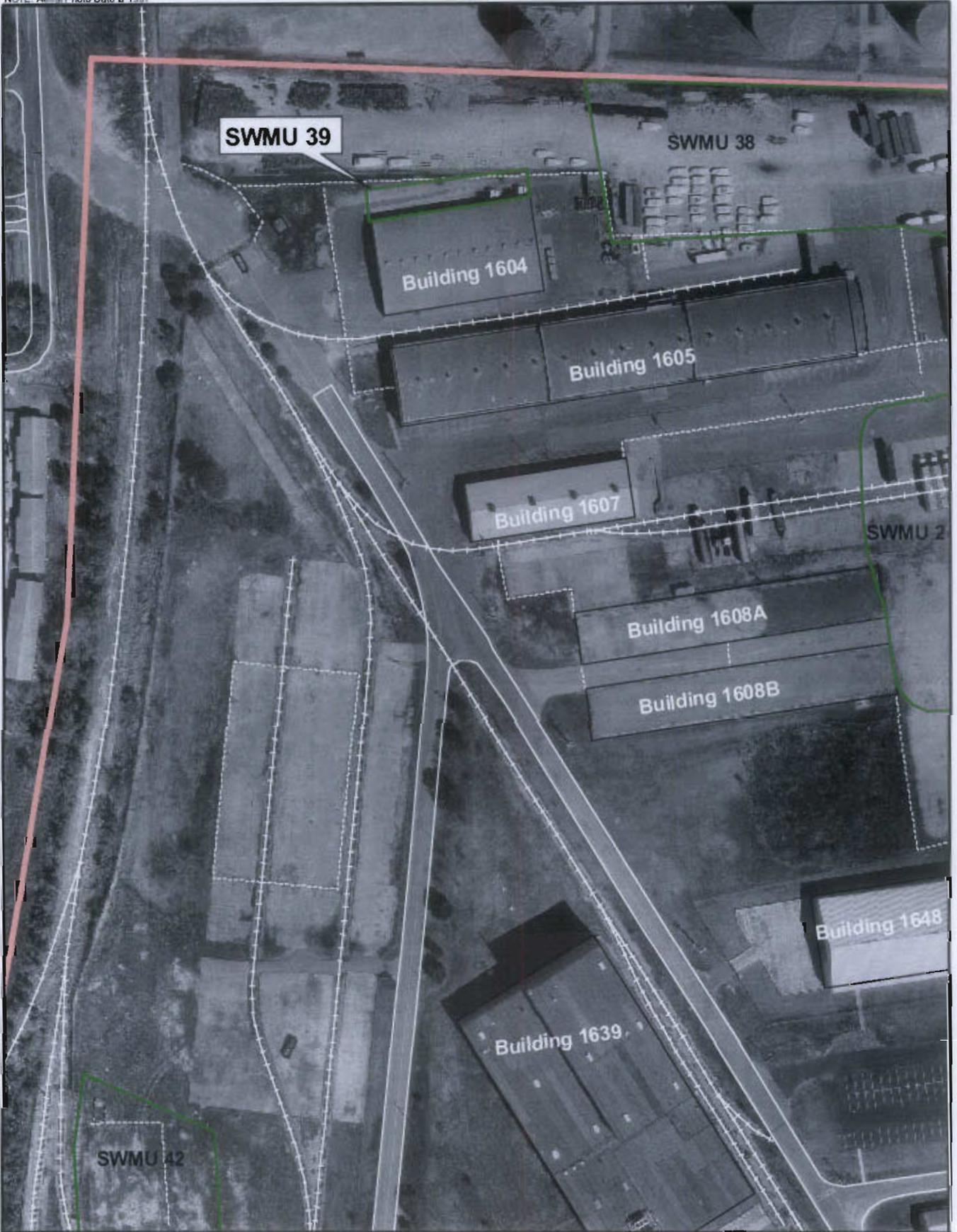


Figure 1-1
 Location of SWMU 39 in Zone A
 SWMU 39, Zone A
 Charleston Naval Complex



-  SWMU Boundary
-  Buildings
-  Zone Boundary
-  Fence
-  Railroads
-  Roads



Figure 1-2
Aerial Photo View of SWMU 39 Area
SWMU 39, Zone A
Charleston Naval Complex

Section 2.0

2.0 Site Background and Previous Investigations

This section provides a brief description of site background and previous investigations. Additional details regarding the site background and previous investigations are provided in the *Zone A RFI Report, Revision 0* (EnSafe Inc. [EnSafe], 1998), the *Corrective Measures Study (CMS) Report for SWMU 39* (CH2M-Jones, 2002a), and the Phase I IMWP for SWMU 39 (CH2M-Jones, 2003).

2.1 Site Background

SWMU 39 is the site of a former outdoor storage area for petroleum, oil, and lubricant (POL) drums along the north wall of Building 1604. Figure 1-2 presents the site layout in northern Zone A, including SWMU 39. Building 1604 is a large warehouse building located in northern Zone A, but south of the original SWMU 39 boundary. SWMU 39 is bounded to the north by the Hess Oil tank farm, to the west by a road and railroad along the base boundary, to the south by railroad lines and buildings associated with SWMU 42, and to the east by buildings associated with SWMU 38.

A marine equipment company currently leases Building 1604 and stores boats and other marine equipment outdoors, north of the building. The original area on the north side of the building where drums were reportedly stored is now covered with asphalt pavement.

Several chlorinated VOCs, such as TCE, 1,2-DCE, and vinyl chloride (VC), have been identified as chemicals of concern (COCs) in groundwater in the shallow aquifer at SWMU 39. The source of VOCs in groundwater is believed to have resulted from minor spills of TCE that occurred at various times during many years of site operations at various locations in the vicinity of SWMU 39. No source of VOC contamination in soils has been identified.

2.2 Site Geology and Hydrogeology

The site hydrogeology consists of a series of Quaternary interbedded sands and clays, varying in thickness from 21 to 56 feet (ft) in the SWMU 39 area. The sands and clays contain an unconfined (water table) aquifer system that overlies the Tertiary Ashley Formation. The Ashley Formation is comprised of silts and clays and acts as an aquiclude

1 for the water table aquifer. Figures 1-4 and 1-5 in Section 1.0 of the SWMU 39 CMS Work
2 Plan (CH2M-Jones, 2002b) depict the current interpretations of the Ashley Formation
3 occurrence.

4 Monitoring wells were installed in shallow (10 to 15 feet below land surface [ft bls]),
5 intermediate (15 to 30 ft bls), and deep (30 to 50 ft bls) sandy zones of groundwater flow in
6 the water table aquifer. The three zones are vertically interconnected and converge into one
7 hydrogeologic unit south of Building 1607. Typical groundwater elevation contours for the
8 shallow, intermediate, and deep aquifer zones are presented in Figures 1-6 through 1-8 of
9 the SWMU 39 CMS Report (CH2M-Jones, 2002a), based upon measurements made in July
10 2001.

11 The Zone A shallow groundwater flow direction has been consistently determined to be in a
12 generally south-southeast direction, with a separate flow component to the southwest,
13 toward an offsite wetland area associated with Noisette Creek. There is minimal tidal
14 influence on groundwater levels, and groundwater flow velocities averaging 14 ft per year
15 have been calculated by EnSafe, based on aquifer test results.

16 A more complete summary of the site-specific geology, hydrogeology, and dissolved
17 chlorinated volatile organic compound (CVOC) distribution in site groundwater is
18 presented in Section 1.0 of the SWMU 39 CMS Report (CH2M-Jones, 2002a).

19 **2.3 Source Area Delineation Investigation**

20 The nature and extent of groundwater contamination at SWMU 39 has been investigated
21 extensively and is summarized in Section 1.2.4 of the SWMU 39 CMS Report. Figures 1-9
22 through 1-24 of that document show the current interpretation of distribution of the various
23 chemicals in each of the three aquifer zones.

24 Additional groundwater DPT sampling was performed in late 2003 in accordance with the
25 Phase I IMWP for SWMU 39 (CH2M-Jones, 2003). This work was performed to more
26 precisely delineate the elevated concentrations of VOCs detected in groundwater near
27 Buildings 1608A and 1608B. VOCs exceeded 1,000 micrograms per liter ($\mu\text{g/L}$) in several
28 DPT samples collected in this area during earlier investigations. The 2003 source delineation
29 DPT sampling is summarized below. Copies of the analytical data sheets are provided in
30 Appendix A.

1 2.3.1 Source Delineation Direct-Push Technology Sampling

2 The Phase I IMWP (CH2M-Jones, 2003) presented the technical approach and rationale for
3 the additional groundwater DPT sampling. This objective was to delineate elevated VOC
4 concentrations in groundwater, particularly those areas with total VOCs exceeding 1,000
5 $\mu\text{g}/\text{L}$ near Buildings 1608A and 1608B in Zone A for potential source area remediation.
6 Figures 2-1 and 2-2 of the Phase I IMWP depicted the interpreted extent of the source area
7 based on previous sampling data and EVS 3-dimensional visualization software. Figures 2-3
8 through 2-6 of the Phase I IMWP presented the available DPT data for the shallow,
9 intermediate, and deep zones of the surficial aquifer system, along with the proposed
10 additional DPT locations for source delineation.

11 A total of 18 additional DPT borings were installed as planned in October 2003, around
12 source areas designated TTA 1A on the north side of Building 1608A and TTA 1B on the
13 south side of Building 1608B. Boring locations are shown on Figure 2-1. Groundwater
14 samples were collected from one 4-foot vertical interval within the intermediate zone
15 (approximately 24 to 28 ft bls), and from three depth intervals within the deep zone of the
16 surficial aquifer, approximately 36 to 38 ft bls, 40 to 42 ft bls, and 44 to 46 ft bls.

17 The exception to this rationale was at boring A039GP115, where only the intermediate
18 sample and first two deep zone samples were collected due to variation in geologic
19 conditions (the Ashley Formation was encountered shallower than expected). Per the Phase
20 I IMWP, samples were not collected from the shallow zone of the surficial aquifer because
21 previous sampling results in this area did not indicate excessive VOC contamination of the
22 shallow zone.

23 Groundwater samples were withdrawn from the subsurface in Teflon tubing with a
24 peristaltic pump, placed in appropriate containers, shipped to a fixed-base laboratory by
25 courier, and analyzed for VOCs by U.S. Environmental Protection Agency (EPA) SW-846
26 methods. The intermediate zone sample from each boring was designated with an "I" in the
27 sample I.D. The deep zone samples were designated with "D1", "D2", and "D3",
28 respectively, by increasing depth. Detected chemicals are summarized in Table 2-1, and
29 complete analytical results are presented in Appendix A.

30 The delineation sampling results indicate that TCE and cis-1,2-dichloroethene (cis-1,2-DCE)
31 were the most commonly detected chemicals, with highest concentrations occurring in the
32 D2 and D3 depth intervals. Total VOC concentrations greater than 1,000 $\mu\text{g}/\text{L}$ were detected
33 only in zones D2 and D3. VOC results for these two zones for TTAs 1A and 1B are shown in
34 Figures 2-2 through 2-5.

- 1 In the intermediate zone, maximum concentrations of TCE (40.6 µg/L), cis-1,2-DCE (109
2 µg/L), and VC (5.1 µg/L) were observed in sample 039GP117-I. Based on results for these
3 intermediate zone samples and previous DPT results in this area, the intermediate aquifer
4 zone in the vicinity of Buildings 1608A and 1608B does not appear to contain a significant
5 continuing source of VOC groundwater contamination.
- 6 In deep zone D1, highest VOC concentrations occurred in boring A039GP117, with total
7 VOC concentrations of approximately 750 µg/L.
- 8 In deep zone D2, total VOCs were detected at levels above 1,000 µg/L in sample
9 039GP128D2 (1,604 µg/L) and in sample 039GP119D2 (1,174 µg/L). Both of these boring
10 locations are on the south side of Building 1608B.
- 11 In the D3 zone, samples 039GP125D3 (1,319 µg/L), 039GP118 (1,248 µg/L), and 039GP119
12 (1,285 µg/L) all exceeded 1,000 µg/L total CVOC concentrations. Borings A039GP118 and
13 A039GP119 are both located on the south side of Building 1608B near the D2 zone
14 exceedances. Sample boring A039GP125 is located on the north side of Building 1608A.
- 15 These results were used to develop the overall IM implementation as described in Section
16 3.0.

1

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration (µg/ L)	Qualifier
A039GP115	039GP115-I	1,2-Dichloroethene (total)	2.1	J
		Acetone	3.9	J
		cis-1,2-Dichloroethylene	2.1	J
		Trichloroethylene (TCE)	0.76	J
	039GP115D1	1,2-Dichloroethene (total)	62.8	=
		Acetone	4.2	J
		Benzene	0.46	J
		cis-1,2-Dichloroethylene	62.8	=
		Trichloroethylene (TCE)	47.3	=
		Vinyl chloride	1.6	J
	039GP115D2	1,2-Dichloroethene (total)	5.8	=
		Acetone	43.7	J
Benzene		0.58	J	
cis-1,2-Dichloroethylene		5.8	=	
Methyl ethyl ketone (2-Butanone)		9.5	J	
Toluene		0.77	J	
A039GP116	039GP116-I	1,2-Dichloroethene (total)	24.3	=
		Acetone	4	J
		cis-1,2-Dichloroethylene	24.3	=
		Trichloroethylene (TCE)	7.6	=
		Vinyl chloride	0.96	J
	039GP116D1	1,1-Dichloroethane	1.1	J
		1,2-Dichloroethene (total)	67	=
		Acetone	3.9	J
		cis-1,2-Dichloroethylene	66.6	=
		trans-1,2-Dichloroethene	0.44	J
		Trichloroethylene (TCE)	18.1	=
	039GP116D2	Vinyl chloride	3.8	J
		1,1-Dichloroethane	1	J
		1,2-Dichloroethene (total)	68.5	=
		Acetone	3.5	J
		cis-1,2-Dichloroethylene	68.5	=
		Trichloroethylene (TCE)	17.3	=
		Vinyl chloride	3.2	J

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration ($\mu\text{g/L}$)	Qualifier
A039GP116 (cont)	039GP116D3	1,1-Dichloroethane	3	J
		1,1-Dichloroethene	3.8	J
		1,2-Dichloroethene (total)	183	=
		Benzene	0.54	J
		cis-1,2-Dichloroethylene	183	=
		Tetrachloroethylene (PCE)	0.84	J
		trans-1,2-Dichloroethene	1.3	J
		Trichloroethylene (TCE)	56.1	=
		Vinyl chloride	10.5	=
		A039GP117	039GP117-I	1,1-Dichloroethane
1,2-Dichloroethene (total)	109			=
Benzene	0.38			J
cis-1,2-Dichloroethylene	109			=
trans-1,2-Dichloroethene	0.7			J
Trichloroethylene (TCE)	40.6			=
Vinyl chloride	5.1			J
1,2-Dichloroethene (total)	104			=
cis-1,2-Dichloroethylene	104			=
039GP117D1	1,1-Dichloroethane			7.5
1,1-Dichloroethene	10		=	
1,2-Dichloroethene (total)	464		=	
Benzene	2.1		J	
cis-1,2-Dichloroethylene	464		=	
Tetrachloroethylene (PCE)	4.1	J		
Toluene	0.43	J		
trans-1,2-Dichloroethene	3	J		
Trichloroethylene (TCE)	241	=		
Vinyl chloride	22.2	=		
039GP117D2	1,1-Dichloroethane	8.9	=	
1,1-Dichloroethene	11.1	=		
1,2-Dichloroethene (total)	554	=		
Benzene	2.1	J		
cis-1,2-Dichloroethylene	554	=		
Tetrachloroethylene (PCE)	4.4	J		
Toluene	0.61	J		
trans-1,2-Dichloroethene	4.8	J		
Trichloroethylene (TCE)	245	=		
Vinyl chloride	32.2	=		

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration (µg/ L)	Qualifier
A039GP117 (cont)	039GP117D3	1,1-Dichloroethane	8.3	=
		1,1-Dichloroethene	10.3	=
		1,2-Dichloroethene (total)	530	=
		Acetone	4	J
		Benzene	1.9	J
		cis-1,2-Dichloroethylene	530	=
		Tetrachloroethylene (PCE)	3.7	J
		Toluene	0.45	J
		trans-1,2-Dichloroethene	3.4	J
		Trichloroethylene (TCE)	218	=
		Vinyl chloride	29.5	=
A039GP118	039GP118-I	1,2-Dichloroethene (total)	36.6	=
		Acetone	2.9	J
		cis-1,2-Dichloroethylene	36.6	=
		Trichloroethylene (TCE)	10.8	=
		Vinyl chloride	1.2	J
	039GP118D1	1,1-Dichloroethane	4.9	J
		1,1-Dichloroethene	8.6	=
		1,2-Dichloroethene (total)	372	=
		Benzene	2.1	J
		cis-1,2-Dichloroethylene	372	=
039GP118D2	1,1-Dichloroethane	8.6	=	
	1,1-Dichloroethene	12.4	=	
	1,2-Dichloroethene (total)	656	=	
	Benzene	3.1	J	
	cis-1,2-Dichloroethylene	656	=	
	Tetrachloroethylene (PCE)	2.5	J	
	trans-1,2-Dichloroethene	3.8	J	
	Trichloroethylene (TCE)	458	=	
	Vinyl chloride	27.1	=	

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration ($\mu\text{g/L}$)	Qualifier
A039GP120	039GP120-I	1,1-Dichloroethene	0.79	J
		1,2-Dichloroethene (total)	38.8	=
		Acetone	2.6	J
		cis-1,2-Dichloroethylene	38.8	=
		Trichloroethylene (TCE)	24.6	=
		Vinyl chloride	0.7	J
	039GP120D1	1,1-Dichloroethene	0.8	J
		1,2-Dichloroethene (total)	35	=
		Acetone	2.8	J
		cis-1,2-Dichloroethylene	34.6	=
		trans-1,2-Dichloroethene	0.39	J
		Trichloroethylene (TCE)	39.9	=
	039GP120D2	1,1-Dichloroethane	1.6	J
		1,1-Dichloroethene	1.9	J
		1,2-Dichloroethene (total)	107	=
		Acetone	15.2	J
		Benzene	0.72	J
		cis-1,2-Dichloroethylene	106	J
		trans-1,2-Dichloroethene	0.44	J
		Trichloroethylene (TCE)	86	=
Vinyl chloride	1.8	J		
	039GP120D3	1,1-Dichloroethane	12.4	J
		1,1-Dichloroethene	16.6	J
		1,2-Dichloroethane	16.2	J
		1,2-Dichloroethene (total)	840	=
		Benzene	5	J
		cis-1,2-Dichloroethylene	835	=
		Tetrachloroethylene (PCE)	19	J
		trans-1,2-Dichloroethene	5.2	J
		Trichloroethylene (TCE)	748	=
Vinyl chloride	23.9	J		
A039GP121	039GP121-I	1,2-Dichloroethene (total)	0.4	J
		Acetone	2.8	J
		cis-1,2-Dichloroethylene	0.4	J

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration (µg/L)	Qualifier
A039GP121 (cont)	039GP121D1	1,2-Dichloroethene (total)	4.1	J
		cis-1,2-Dichloroethylene	4.1	J
		Trichloroethylene (TCE)	1.5	J
	039GP121D2	1,1-Dichloroethane	6.4	J
		1,1-Dichloroethene	8.7	J
		1,2-Dichloroethene (total)	453	=
		Acetone	2.9	J
		Benzene	0.73	J
		cis-1,2-Dichloroethylene	448	=
		Tetrachloroethylene (PCE)	3.3	J
		trans-1,2-Dichloroethene	5.5	J
		Trichloroethylene (TCE)	81.3	J
	Vinyl chloride	21.8	J	
	039GP121D3	1,1-Dichloroethane	8.7	J
		1,1-Dichloroethene	11.8	J
1,2-Dichloroethene (total)		631	=	
Acetone		5	J	
Benzene		0.76	J	
cis-1,2-Dichloroethylene		624	=	
Tetrachloroethylene (PCE)		3.9	J	
trans-1,2-Dichloroethene		7.5	J	
Trichloroethylene (TCE)		148	=	
Vinyl chloride	29.6	J		
A039GP122	039GP122D1	1,2-Dichloroethene (total)	2.2	J
		Acetone	2.8	J
		cis-1,2-Dichloroethylene	2.2	J
		Trichloroethylene (TCE)	0.57	J
	039GP122D2	1,1-Dichloroethane	1.9	J
		1,1-Dichloroethene	1.1	J
		1,2-Dichloroethene (total)	90.8	=
		cis-1,2-Dichloroethylene	89.7	=
		Tetrachloroethylene (PCE)	4.9	J
		trans-1,2-Dichloroethene	1.2	J
		Trichloroethylene (TCE)	15.2	=
	Vinyl chloride	5.6	J	

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration ($\mu\text{g/L}$)	Qualifier
A039GP122 (cont)	039GP122D3	1,1-Dichloroethane	1.8	J
		1,1-Dichloroethene	1.2	J
		1,2-Dichloroethene (total)	84.8	=
		cis-1,2-Dichloroethylene	83.6	=
		Tetrachloroethylene (PCE)	4.8	J
		trans-1,2-Dichloroethene	1.1	J
		Trichloroethylene (TCE)	15.3	=
		Vinyl chloride	5.6	J
A039GP123	039GP123-I	1,2-Dichloroethene (total)	0.31	J
		Acetone	2.4	J
		cis-1,2-Dichloroethylene	0.31	J
	039GP123-D1	1,2-Dichloroethene (total)	3.2	J
		Acetone	3	J
		cis-1,2-Dichloroethylene	3.2	J
		Trichloroethylene (TCE)	0.46	J
	039GP123D2	1,1-Dichloroethene	0.51	J
		1,2-Dichloroethene (total)	42.5	=
		cis-1,2-Dichloroethylene	42.1	=
		trans-1,2-Dichloroethene	0.38	J
		Trichloroethylene (TCE)	6.3	=
		Vinyl chloride	1.6	J
039GP123D3	1,2-Dichloroethene (total)	41.9	J	
	cis-1,2-Dichloroethylene	41.9	J	
	Trichloroethylene (TCE)	6.5	J	
	Vinyl chloride	1.6	J	
A039GP124	039GP124-I	1,2-Dichloroethene (total)	0.61	J
		Acetone	2.4	J
		cis-1,2-Dichloroethylene	0.61	J
	039GP124D1	1,2-Dichloroethene (total)	11.5	=
		cis-1,2-Dichloroethylene	11.5	=
		Trichloroethylene (TCE)	4.5	J
	039GP124D2	1,1-Dichloroethane	9.4	J
		1,1-Dichloroethene	16	J
		1,2-Dichloroethene (total)	773	=
		Acetone	3.5	J

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration ($\mu\text{g/L}$)	Qualifier
A039GP124 (cont)		Benzene	1.2	J
		cis-1,2-Dichloroethylene	767	=
		Tetrachloroethylene (PCE)	0.36	J
		trans-1,2-Dichloroethene	9.6	J
		Trichloroethylene (TCE)	248	=
		Vinyl chloride	36.1	J
	039GP124D3	1,1-Dichloroethane	7.6	J
		1,1-Dichloroethene	12.6	J
		1,2-Dichloroethene (total)	634	=
		Acetone	2.8	J
		Benzene	1.1	J
		cis-1,2-Dichloroethylene	627	=
		trans-1,2-Dichloroethene	7.4	J
		Trichloroethylene (TCE)	174	=
		Vinyl chloride	27.3	J
A039GP125	039GP125-I	1,2-Dichloroethene (total)	15.8	=
		cis-1,2-Dichloroethylene	15.8	=
		Trichloroethylene (TCE)	5.5	=
	039GP125D1	1,2-Dichloroethene (total)	12.1	=
		cis-1,2-Dichloroethylene	12.1	=
		Trichloroethylene (TCE)	3.2	J
	039GP125D2	1,1-Dichloroethane	5.3	J
		1,1-Dichloroethene	6.4	J
		1,2-Dichloroethene (total)	374	J
		Acetone	5.3	J
		Benzene	0.58	J
		cis-1,2-Dichloroethylene	371	J
		Tetrachloroethylene (PCE)	0.7	J
		trans-1,2-Dichloroethene	3.7	J
		Trichloroethylene (TCE)	69.2	J
		Vinyl chloride	14.9	J
	039GP125D3	1,1-Dichloroethane	12.6	J
		1,1-Dichloroethene	17.2	J
		1,2-Dichloroethene (total)	909	=
		Acetone	4	J
		Benzene	0.95	J
		cis-1,2-Dichloroethylene	901	=

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration (µg/ L)	Qualifier
A039GP125 (cont)		Tetrachloroethylene (PCE)	2.7	J
		trans-1,2-Dichloroethene	8.5	J
		Trichloroethylene (TCE)	331	=
		Vinyl chloride	38.1	J
A039GP126	039GP126-I	1,2-Dichloroethene (total)	10.3	=
		cis-1,2-Dichloroethylene	10.3	=
		Trichloroethylene (TCE)	1.2	J
	039GP126D1	1,1-Dichloroethane	0.66	J
		1,2-Dichloroethene (total)	17.3	=
		Acetone	3.8	J
		cis-1,2-Dichloroethylene	17.3	=
		Tetrachloroethylene (PCE)	0.55	J
		Trichloroethylene (TCE)	4.7	J
	039GP126D2	1,1-Dichloroethane	6	J
		1,1-Dichloroethene	7.5	J
		1,2-Dichloroethene (total)	446	=
		Acetone	2.6	J
		Benzene	0.64	J
		cis-1,2-Dichloroethylene	441	=
		Tetrachloroethylene (PCE)	27.9	J
		trans-1,2-Dichloroethene	6.5	J
		Trichloroethylene (TCE)	77.5	J
		Vinyl chloride	19.5	J
	039GP126D3	1,1-Dichloroethane	6.5	J
		1,1-Dichloroethene	7	J
		1,2-Dichloroethene (total)	340	=
		Acetone	5.6	J
		Benzene	0.77	J
		cis-1,2-Dichloroethylene	337	=
		Tetrachloroethylene (PCE)	22.3	J
		trans-1,2-Dichloroethene	3.8	J
		Trichloroethylene (TCE)	71	J
		Vinyl chloride	21	J

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration ($\mu\text{g/L}$)	Qualifier
A039GP127	039GP127-I	1,1-Dichloroethene	2.3	J
		1,2-Dichloroethene (total)	53	=
		cis-1,2-Dichloroethylene	52.6	=
		trans-1,2-Dichloroethene	0.46	J
		Trichloroethylene (TCE)	35.9	=
		Vinyl chloride	2.8	J
	039GP127D1	1,1-Dichloroethene	0.94	J
		1,2-Dichloroethene (total)	19	=
		Acetone	4.8	J
		cis-1,2-Dichloroethylene	19	=
		Tetrachloroethylene (PCE)	1	J
		Trichloroethylene (TCE)	34.6	=
	039GP127D2	1,1-Dichloroethane	7.4	J
		1,1-Dichloroethene	9.3	J
		1,2-Dichloroethene (total)	454	=
		Acetone	3.5	J
		Benzene	2.3	J
		cis-1,2-Dichloroethylene	454	=
		Tetrachloroethylene (PCE)	15.7	J
		trans-1,2-Dichloroethene	4.1	J
		Trichloroethylene (TCE)	208	=
		Vinyl chloride	29.1	J
	039GP127D3	1,1-Dichloroethane	7.6	=
		1,1-Dichloroethene	10	=
		1,2-Dichloroethene (total)	473	=
		Acetone	6.6	J
		Benzene	2.4	J
		cis-1,2-Dichloroethylene	473	=
		Tetrachloroethylene (PCE)	15	=
		trans-1,2-Dichloroethene	4	J
		Trichloroethylene (TCE)	215	=
		Vinyl chloride	28.5	=

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration (µg/ L)	Qualifier
A039GP128	039GP128-I	1,1-Dichloroethene	1	J
		1,2-Dichloroethene (total)	56.6	=
		Acetone	2.8	J
		cis-1,2-Dichloroethylene	55.1	=
		trans-1,2-Dichloroethene	1.5	J
		Trichloroethylene (TCE)	8.9	=
		Vinyl chloride	1.1	J
	039GP128D1	1,1-Dichloroethene	3.2	J
		1,2-Dichloroethene (total)	65.6	=
		Acetone	2.4	J
		Benzene	0.45	J
		cis-1,2-Dichloroethylene	65.2	=
		Tetrachloroethylene (PCE)	1.3	J
		trans-1,2-Dichloroethene	0.49	J
		Trichloroethylene (TCE)	203	=
		Vinyl chloride	0.96	J
	039GP128D2	1,1-Dichloroethane	12	J
		1,1-Dichloroethene	15.5	J
		1,2-Dichloroethene (total)	891	J
		Acetone	6	J
		Benzene	3	J
		cis-1,2-Dichloroethylene	887	J
		Tetrachloroethylene (PCE)	6.1	J
		trans-1,2-Dichloroethene	5.2	J
		Trichloroethylene (TCE)	655	J
		Vinyl chloride	19.2	J
	039GP128D3	1,1-Dichloroethane	8.3	J
		1,1-Dichloroethene	10.9	J
		1,2-Dichloroethene (total)	616	J
		Acetone	7.8	J
		Benzene	2	J
		cis-1,2-Dichloroethylene	616	J
		Tetrachloroethylene (PCE)	8.7	J
		trans-1,2-Dichloroethene	2.3	J
		Trichloroethylene (TCE)	388	J
		Vinyl chloride	15.8	J

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration (µg/L)	Qualifier
A039GP129	039GP12928	1,1-Dichloroethane	1.1	J
		1,2-Dichloroethene (total)	37.5	=
		cis-1,2-Dichloroethylene	36.8	=
		trans-1,2-Dichloroethene	0.68	J
		Trichloroethylene (TCE)	10.7	=
	039GP12938	1,1-Dichloroethane	1.2	J
		1,2-Dichloroethene (total)	44.2	=
		cis-1,2-Dichloroethylene	43.8	=
		trans-1,2-Dichloroethene	0.41	J
		Trichloroethylene (TCE)	14.3	=
	039GP12942	1,1-Dichloroethane	4.5	J
		1,2-Dichloroethene (total)	332	=
		Benzene	0.74	J
		cis-1,2-Dichloroethylene	328	=
		trans-1,2-Dichloroethene	4.3	J
		Trichloroethylene (TCE)	44.1	=
		Vinyl chloride	24.4	=
	039GP12946	1,1-Dichloroethane	4.7	J
		1,2-Dichloroethene (total)	351	=
		Benzene	0.73	J
		cis-1,2-Dichloroethylene	346	=
		Tetrachloroethylene (PCE)	0.36	J
		trans-1,2-Dichloroethene	5.1	=
		Trichloroethylene (TCE)	49.1	=
Vinyl chloride	23.2	=		
A039GP130	039GP13038	1,1-Dichloroethane	1.1	J
		1,2-Dichloroethene (total)	57.5	=
		Benzene	0.37	J
		cis-1,2-Dichloroethylene	56.8	=
		trans-1,2-Dichloroethene	0.72	J
		Trichloroethylene (TCE)	28.1	=
	039GP13042	1,1-Dichloroethane	1.1	J
		1,2-Dichloroethene (total)	75.3	=
		cis-1,2-Dichloroethylene	74.8	=
		trans-1,2-Dichloroethene	0.56	J
		Trichloroethylene (TCE)	19.8	=
		Vinyl chloride	4.4	J

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

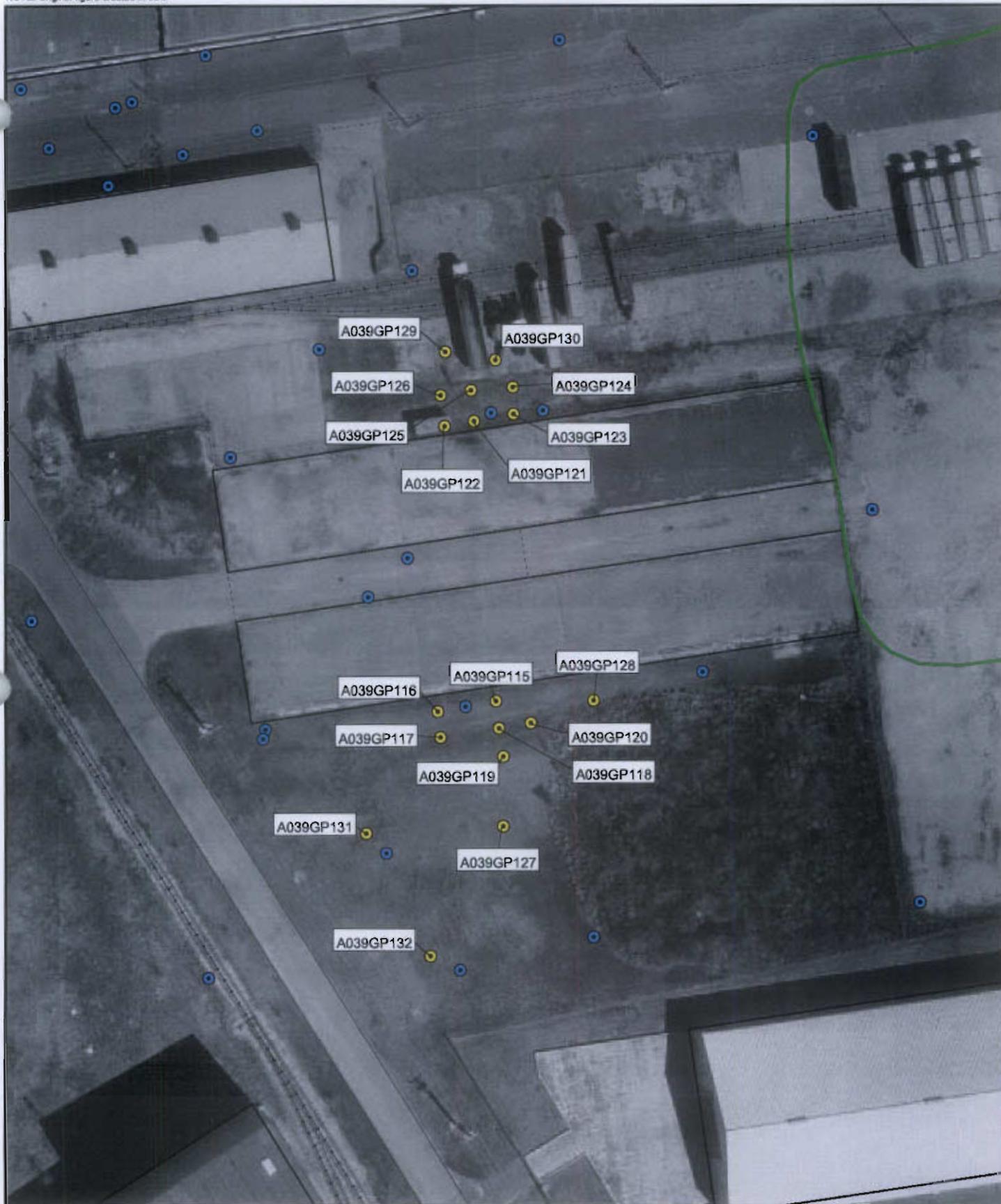
Station ID	Sample ID	Parameter	Concentration ($\mu\text{g/L}$)	Qualifier
A039GP130 (cont)	039GP13046	1,1-Dichloroethane	1.5	J
		1,2-Dichloroethene (total)	96.5	=
		cis-1,2-Dichloroethylene	95.6	=
		Tetrachloroethylene (PCE)	0.48	J
		trans-1,2-Dichloroethene	0.92	J
		Trichloroethylene (TCE)	26.1	=
		Vinyl chloride	5.7	J
A039GP131	039GP13128	1,2-Dichloroethene (total)	4.1	J
		cis-1,2-Dichloroethylene	4.1	J
		Trichloroethylene (TCE)	2.6	J
	039GP13138	1,1-Dichloroethane	0.69	J
		1,2-Dichloroethene (total)	36	=
		cis-1,2-Dichloroethylene	36	=
		Trichloroethylene (TCE)	21.4	=
	039GP13142	1,2-Dichloroethene (total)	10.5	=
		cis-1,2-Dichloroethylene	10.5	=
		Trichloroethylene (TCE)	4.8	J
	039GP13146	1,2-Dichloroethene (total)	11.2	=
		cis-1,2-Dichloroethylene	11.2	=
		Trichloroethylene (TCE)	4.9	J
A039GP132	039GP13238	1,1-Dichloroethane	0.94	J
		1,2-Dichloroethene (total)	49.2	=
		cis-1,2-Dichloroethylene	48.8	=
		Tetrachloroethylene (PCE)	3.4	J
		trans-1,2-Dichloroethene	0.49	J
		Trichloroethylene (TCE)	7.6	=
		Vinyl chloride	4.4	J
	039GP13242	1,1-Dichloroethane	4	J
		1,2-Dichloroethene (total)	231	=
		Benzene	0.57	J
		cis-1,2-Dichloroethylene	229	=
		Tetrachloroethylene (PCE)	7	=
		trans-1,2-Dichloroethene	2.2	J
		Trichloroethylene (TCE)	27.9	=
		Vinyl chloride	9.4	J

TABLE 2-1
 Summary of Detected VOCs in DPT samples
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Station ID	Sample ID	Parameter	Concentration (µg/ L)	Qualifier
A039GP132 (cont)	039GP13246	1,1-Dichloroethane	5.1	=
		1,2-Dichloroethene (total)	274	=
		Benzene	0.76	J
		cis-1,2-Dichloroethylene	270	=
		Tetrachloroethylene (PCE)	20.3	=
		trans-1,2-Dichloroethene	3.6	J
		Trichloroethylene (TCE)	51.2	=
		Vinyl chloride	15.6	=

1

NOTE: Aerial Photo Date is 1997
NOTE: Original figure created in color



● Groundwater Probe



1 inch = 73.6076 feet

Figure 2-1
Source Area DPT Borings
SWMU 39, Zone A
Charleston Naval Complex

NOTE: Aerial Photo Date is 1997
NOTE: Original figure created in color



A039GP125
VC 14.9 J ug/L
cis-1,2,DCE 371 J ug/L
TCE 69.2 J ug/L

A039GP129
TCE 44.1 ug/L
VC 24.4 ug/L

A039GP130
cis-1,2,DCE 74.8 ug/L
TCE 19.8 ug/L
VC 4.4 J ug/L

A039GP126
TCE 77.5 J ug/L
VC 19.5 J ug/L
cis-1,2,DCE 441 ug/L

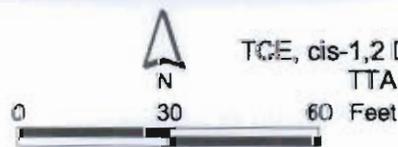
A039GP124
VC 36.1 J ug/L
TCE 248 ug/L
cis-1,2,DCE 767 ug/L

A039GP122
cis-1,2,DCE 89.7 ug/L
TCE 15.2 ug/L
VC 5.6 J ug/L

A039GP123
cis-1,2,DCE 42.1 ug/L
TCE 6.3 ug/L
VC 1.6 J ug/L

A039GP121
TCE 81.3 J ug/L
VC 21.8 J ug/L
cis-1,2,DCE 448 ug/L

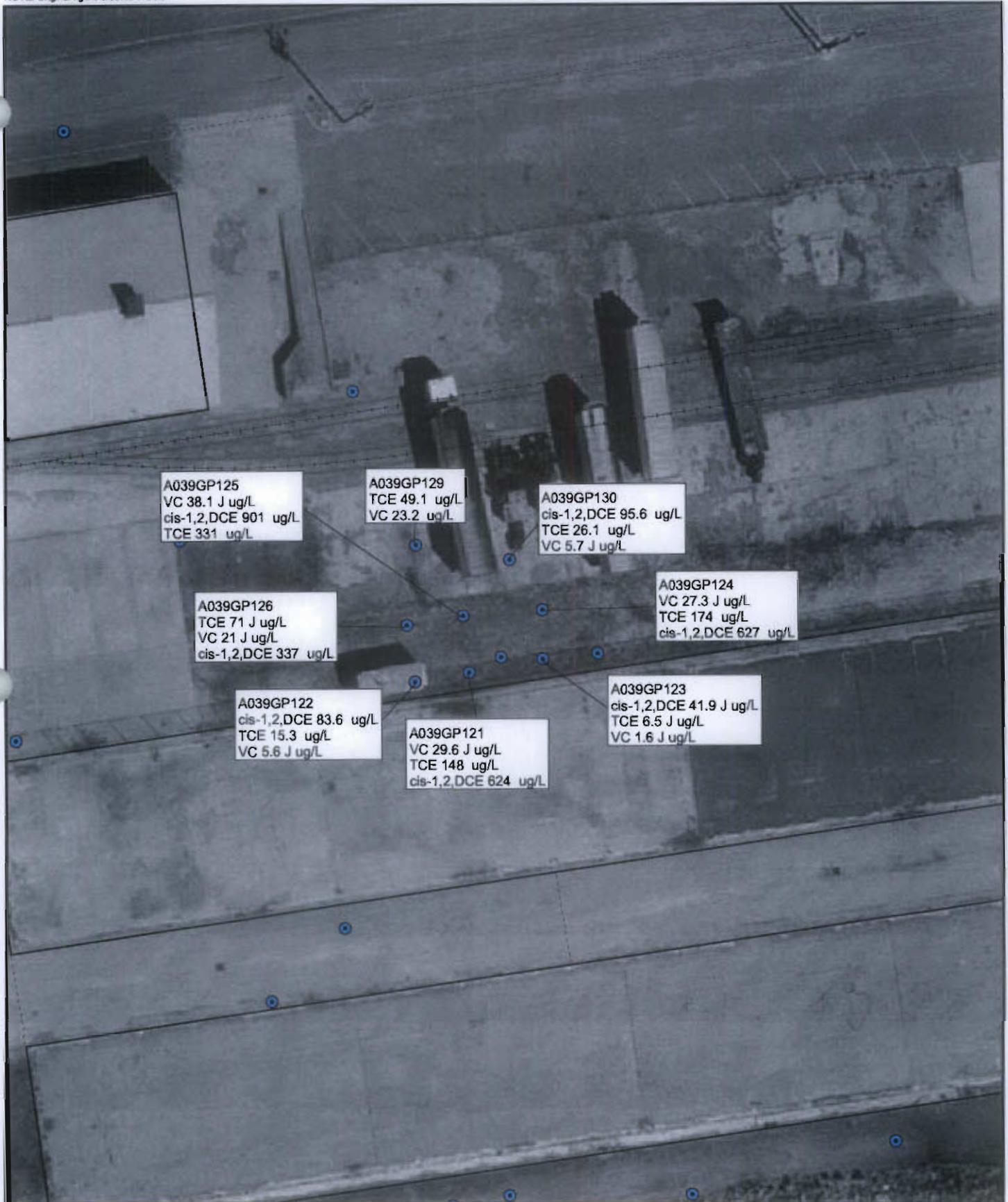
● Groundwater Probe



1 inch = 38.1357 feet

Figure 2-2
TCE, cis-1,2 DCE, and VC in D2 Interval Groundwater
TTA 1A, SWMU 39 Source Area Delineation
Charleston Naval Complex

NOTE: Aerial Photo Date is 1997
NOTE: Original figure created in color



A039GP125
VC 38.1 J ug/L
cis-1,2,DCE 901 ug/L
TCE 331 ug/L

A039GP129
TCE 49.1 ug/L
VC 23.2 ug/L

A039GP130
cis-1,2,DCE 95.6 ug/L
TCE 26.1 ug/L
VC 5.7 J ug/L

A039GP126
TCE 71 J ug/L
VC 21 J ug/L
cis-1,2,DCE 337 ug/L

A039GP124
VC 27.3 J ug/L
TCE 174 ug/L
cis-1,2,DCE 627 ug/L

A039GP122
cis-1,2,DCE 83.6 ug/L
TCE 15.3 ug/L
VC 5.6 J ug/L

A039GP121
VC 29.6 J ug/L
TCE 148 ug/L
cis-1,2,DCE 624 ug/L

A039GP123
cis-1,2,DCE 41.9 J ug/L
TCE 6.5 J ug/L
VC 1.6 J ug/L

● Groundwater Probe

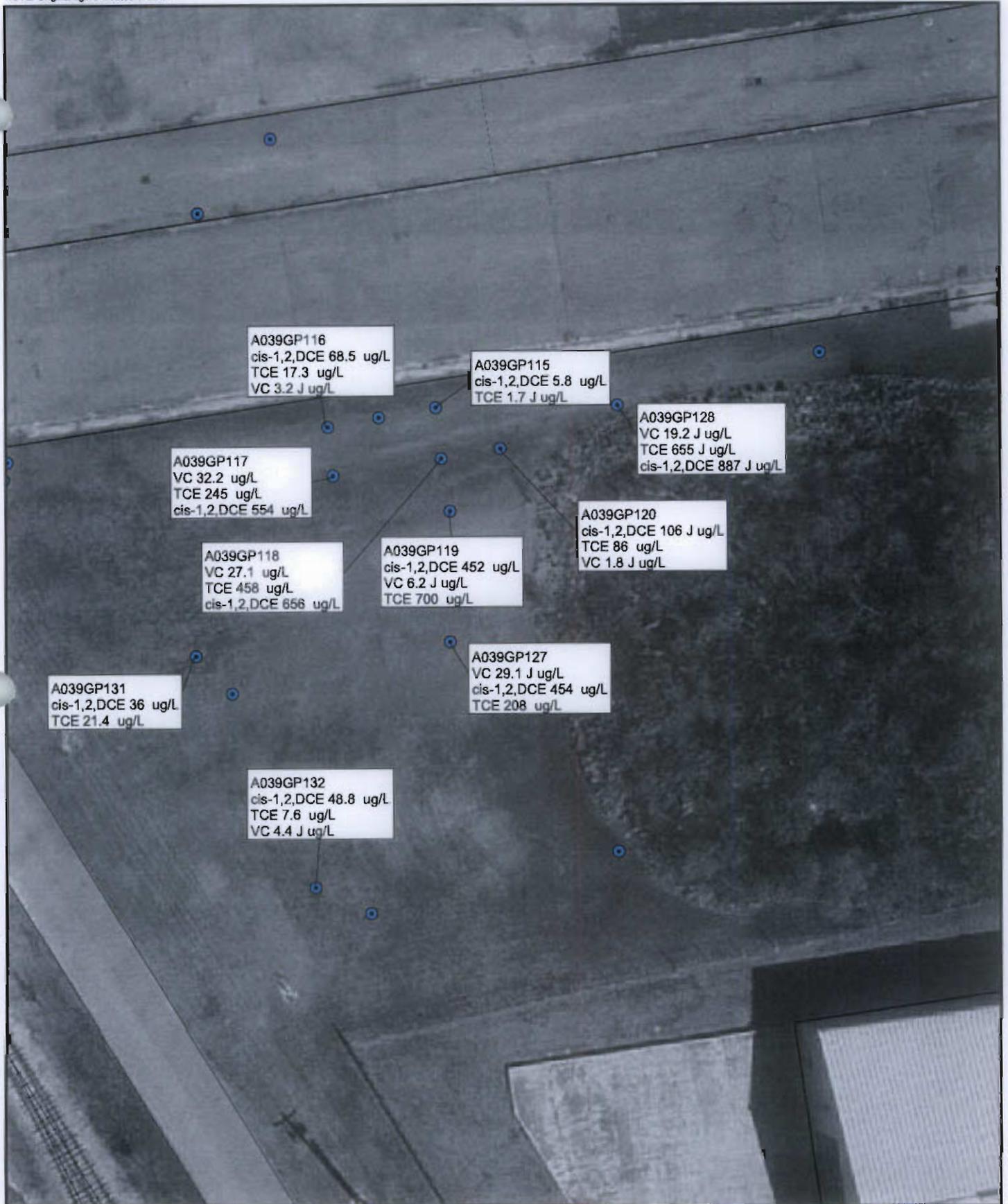


0 30 60 Feet

1 inch = 39.2778 feet

Figure 2-3
TCE, 1,2 DCE, and VC in D3 Interval Groundwater
TTA 1A, SWMU 39 Source Area Delineation
Charleston Naval Complex

NOTE: Aerial Photo Date is 1997
NOTE: Original figure created in color



● Groundwater Probe

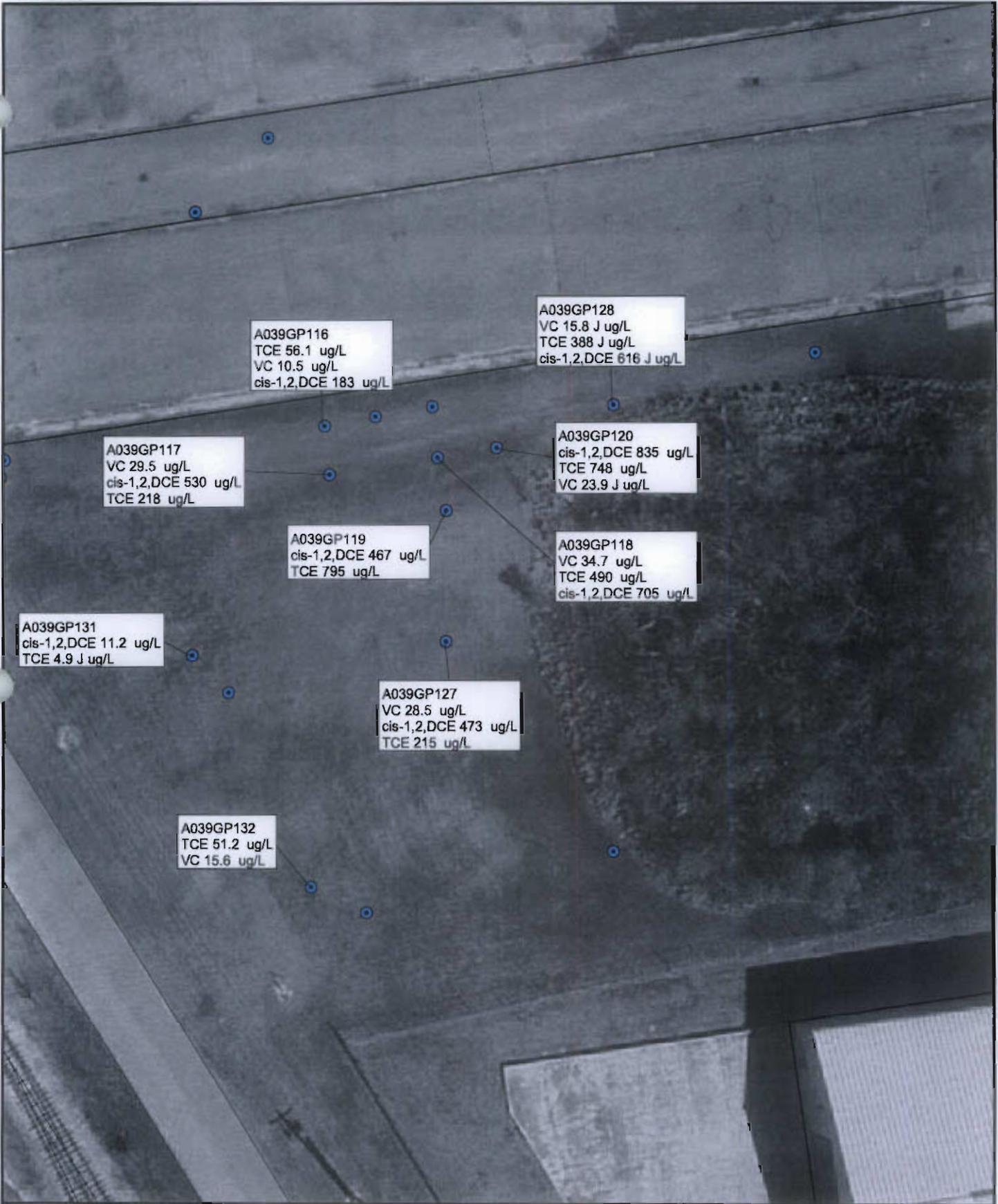


0 30 60 Feet

1 inch = 39.2778 feet

Figure 2-4
TCE, 1,2 DCE, and VC in D2 Interval Groundwater
TTA 1B, SWMU 39 Source Area Delineation
Charleston Naval Complex

NOTE: Aerial Photo Date is 1997
NOTE: Original figure created in color



● Groundwater Probe



Figure 2-5
TCE, 1,2 DCE, and VC in D3 Interval Groundwater
TTA 1B SWMU 39 Source Area Delineation
Charleston Naval Complex

Section 3.0

1 **3.0 Technical Approach**

2 The CMS Report (CH2M-Jones, 2002a) evaluated applicable remedial alternative
3 technologies for addressing both the suspected VOC source area and the VOC plume. In
4 ISCR using ZVI injection was selected as the preferred source control measure, and
5 monitored natural attenuation (MNA) was selected for the VOC plume. The complete
6 alternatives analysis, remedial design criteria, and implementation cost estimates used in
7 the screening and selection process are presented in the CMS Report. In order to expedite
8 implementation of this source area treatment, the Base Realignment and Closure Act
9 (BRAC) Cleanup Team (BCT) has agreed to perform this source area activity as an IM.

10 Prior to implementing the ISCR source control alternative with ZVI at SWMU 39, the
11 presence and size of the suspected source area required confirmation. The suspected source
12 area was investigated further with DPT sampling of the intermediate and deep
13 groundwater zones as described in Section 2.0 of this IMWP. This section discusses the
14 approach for implementing the ISCR IM in the surficial aquifer zones previously identified
15 as having the greatest total VOC groundwater concentrations.

16 **3.1 Target Treatment Area Delineation**

17 The TTAs represent the interpreted lateral and vertical extent of elevated VOC
18 concentrations that are targeted for treatment during the IM. Figure 3-1 shows the general
19 locations of the TTAs at SWMU 39. TTA 1A is an approximate 20 by 40 foot area bounded
20 by Geoprobe locations A039GP124 and A039GP125 north of Building 1608A. TTA 1B
21 encompasses Geoprobe locations A039GP118, A039GP119, A039GP120, and A039GP128 and
22 is approximately 20 by 100 ft. TTA 1B is located immediately south of Building 1608B. The
23 targeted treatment depth in these TTAs is the deeper zone of the shallow aquifer within
24 approximately 8 to 12 ft of the top of the Ashley Formation. This zone extends from
25 approximately 38 to 46 ft bls in TTA 1A and from approximately 34 to 46 ft bls in TTA 1B.

26 **3.2 Target Treatment Objectives**

27 The proposed approach to treating the source areas at SWMU 39, ISCR using powdered ZVI
28 delivered via PF, is an innovative remediation that has been applied at two other sites at the
29 CNC. These sites are SWMUs 25/70, where ISCR was applied to reduce hexavalent

1 chromium to trivalent chromium, and SWMU 166, where ISCR was used to treat TCE. The
2 effectiveness of this treatment approach ranged from approximately 80 to greater than 95
3 percent reduction of hexavalent chromium at SWMUs 25/70 to 30 to greater than 95
4 reduction of TCE concentrations at SWMU 166. Although it is difficult to predict exactly
5 how effective this treatment process will be at SWMU 39, it is expected that the effectiveness
6 of this approach at SWMU 39 will be closer to that achieved at SWMUs 25/70 rather than
7 what was achieved at SWMU 166. The reason for this is because the hydrogeologic
8 conditions and geochemistry at SWMU 39 are very similar to those at SWMUs 25/70, while
9 the hydrogeologic conditions and geochemistry at SWMU 166 are significantly different
10 than at SWMUs 39 and 25/70. Hydrogeologic conditions at SWMU 166 are generally
11 sandier with much less clay than at SWMUs 39 and 25/70. Also, the aquifer at SWMU 166 is
12 much more aerobic than at SWMUs 39 and 25/70, where iron-reducing conditions are
13 generally present.

14 The ISCR system at SWMU 39 will be developed with an objective of achieving a treatment
15 efficiency such that individual VOC concentrations will be reduced to no greater than 100
16 $\mu\text{g/L}$. The actual treatment effectiveness achieved may be somewhat above or below this
17 target and will be determined through post-treatment monitoring.

18 While it is considered unlikely to happen, it is possible that measured concentrations of
19 VOCs in groundwater within the TTAs may increase slightly immediately after treatment.
20 This may occur if residual source material, such as a small amount of entrapped residual
21 TCE product, becomes mixed into the groundwater as a result of the iron injections. Such an
22 effect was observed at SWMU 166 in a few wells. However, because the concentrations of
23 VOCs are significantly lower at SWMU 39 than at SWMU 166, it is unlikely that free phase
24 residual source material is present at SWMU 39.

25 **3.3 Treatment Technology Description**

26 The treatment technology selected for remediation of VOCs at SWMU 39 is ISCR of CVOCs
27 through the use of highly reactive ZVI powder. The vendor selected to implement the IM
28 using this treatment technology is ARS Technologies, Inc. (ARS), out of New Brunswick,
29 New Jersey. ARS employs a patented subsurface in situ remediation process called the
30 FeroxSM process, which is described below. Information presented in the following sections
31 has been provided by ARS (ARS, 2001).

1 **3.3.1 FeroxSM Technology Background**

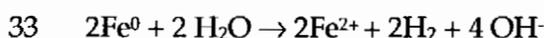
2 The FeroxSM technology is a patented in situ subsurface remediation process for the
3 treatment of chlorinated solvents and dissolved metals. The FeroxSM technology involves the
4 subsurface injection and dispersion of specific quantities of highly reactive ZVI powder into
5 saturated or unsaturated contamination zones. The ZVI incorporated in the FeroxSM
6 application is a 98+ percent pure, reduced iron powder. The powder's particle size, shape,
7 and carbon content result in a highly reactive material. The small particle size of this ZVI
8 powder provides a large surface area per unit weight, resulting in the material being
9 reactive in the subsurface.

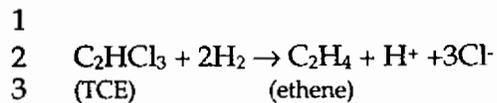
10 The ZVI will be delivered into the subsurface through ARS's patented Liquid Atomized
11 Injection (LAI) Technology. In conjunction with the LAI process, ARS can apply PF at each
12 injection point, if necessary, prior to introducing the ZVI into the subsurface. The use of LAI
13 in conjunction with fracturing provides a unique method to apply the ZVI to the subsurface
14 and directly access and target contaminants within the subsurface.

15 **3.3.2 Reductive Dechlorination of CVOCs by ZVI using FeroxSM Method**

16 The reaction mechanism for the reduction of TCE begins with the corrosion of ZVI as it
17 comes into contact with a water molecule. The products of corrosion are ferrous iron (Fe⁺²),
18 hydrogen gas (H²), and a hydroxyl ion (OH⁻). The hydrogen gas produced combines with
19 the halogenated organic compound (e.g., TCE) on the surface of a catalyst (iron powder,
20 naturally-occurring electron mediator, or unidentified constituents in the soil organic
21 matter) whereby the contaminant is dehalogenated. In addition to the dehalogenated
22 compound, proton (H⁺) and chloride ions (Cl⁻) are produced. The proton combines with the
23 hydroxyl ion, formed during the corrosion reaction, to re-form as a water molecule.
24 Accordingly, the end products of this reaction are ferrous iron, chloride ions, and
25 dehalogenated compounds.

26 By using naturally occurring substances present in the soil as electron mediators, the target
27 organic (i.e., TCE) does not have to be in direct contact with the iron powder to be treated.
28 As a result of the dehalogenation reaction described above, changes to the groundwater
29 geochemistry occur, including slight elevation of pH, a significant decrease of oxidation-
30 reduction potential (ORP), an increase in chloride levels, and a decrease in dissolved oxygen
31 (DO). The primary dehalogenation reaction process is represented by the following
32 equation:





4 (ARS, 2001).

5 The end product of the reaction is ethene that is not persistent in the subsurface
6 environment and quickly degrades further to methane, carbon dioxide, water, and
7 chlorides.

8 **3.3.3 FeroxSM Injection Method**

9 A critical component of the proposed ISCR of the targeted VOCs is ensuring that the ZVI is
10 adequately distributed within the subsurface zone. To accomplish this, ARS uses a gas-
11 based PF delivery approach for the emplacement of the ZVI into the subsurface. The
12 emplacement method is as important as the chemical treatment since the heterogeneous
13 geology at SWMU 39 presents significant limitations for other conventional hydraulic
14 injection methods.

15 PF is a patented process in which a gas is injected into the subsurface at pressures that
16 exceed the combined overburden pressure and cohesive soil strength of the geologic matrix,
17 and at flow rates that exceed the effective permeability of the undisturbed soil. The result is
18 the propagation of fractures outward from the injection well to distances of 10 to 20 ft. PF
19 allows for effective permeability enhancement of the clay lenses, sandy silts, and cohesive
20 materials, resulting in a reduction of geologic heterogeneities present within the subsurface.
21 This occurs prior to and while emplacing the reactive ZVI in the subsurface.

22 The ZVI slurry is fed directly into the gas stream aboveground and becomes atomized in the
23 process gas. Pressures of 50 to 100 pounds per square inch gauge (psig) are needed to
24 emplace the material within the subsurface. An integrated gas/FeroxSM atomization
25 assembly consisting of pneumatic packers straddling a 360-degree injection nozzle creates
26 discrete target intervals of 18 to 36 inches. ARS's current commercial equipment is capable
27 of injecting up to 50 gallons of ZVI slurry per minute. Figure 3-2 shows the schematic of a
28 typical injection well.

29 **3.4 Implementation Approach**

30 As part of the project scope, several individual tasks will be performed to effectively meet
31 the goals outlined in this work plan. The following list summarizes the sequence of field
32 activities and related tasks.

- 1 1. Borehole Casing Installation
- 2 2. PF/FeroxSM Injections
- 3 3. Monitoring Well Installation
- 4 4. Post-Injection Groundwater Sampling (1 week after completion of injections and
- 5 quarterly afterwards)
- 6 5. Data Evaluation and Reporting (concurrent with groundwater sampling task)

7 **3.4.1 Injection Operations**

8 The injection process consists of a skid-mounted gas pressure module complete with an
9 injection control manifold and a digital data logger used to monitor various operational
10 parameters. Due to the large quantity of compressed gas needed for the FeroxSM injections, a
11 bulk nitrogen "tube" trailer will be mobilized to the site.

12 The compressed nitrogen is routed through the gas module's control manifold and is
13 connected by a high-pressure hose to the downhole packer/nozzle assembly. Once all
14 equipment is in place and all field personnel are instructed on safety aspects of the activities,
15 the outer drive (OD) casing will be raised, exposing the injector nozzle to the formation. The
16 packer(s) will be inflated and the formation will be pneumatically fractured. Fracturing
17 methods consist of applying pressurized nitrogen for approximately 15 seconds within a 20-
18 to-36-inch intervals by the use of a double pneumatic straddle packer assembly or below at
19 an interval below a single pneumatic packer.

20 FeroxSM injections will be performed immediately following PF at each injection interval
21 within the borehole. The ZVI powder will be injected into the subsurface utilizing a nitrogen
22 gas stream as the carrier fluid. The gas manifold system will provide accurate control over
23 the injection pressures, which will enable ARS to achieve the optimal iron powder
24 dispersion.

25 The iron slurry-nitrogen mixture will be injected through the pneumatic packer assembly
26 and performed in approximately 20-to-36-inch intervals. The duration and number of
27 injections in each borehole are directly dependent upon the quantity of iron desired within
28 the specific zone. Application of the ZVI material will initiate at the top of the Ashley
29 Formation (bottom of the target interval) and advance using a step injection process up
30 through the target interval. This will ensure that borehole stability is maintained. When the
31 targeted dosage of iron is emplaced into the formation, the packer(s) will be deflated and
32 the nozzle assembly will be raised to the next injection location. Where appropriate, the
33 injection operations will be initiated at the periphery of the TTA and moved inward within
34 the TTA.

3.4.2 Pneumatic Fracturing Monitoring Parameters

During each PF injection, the following monitoring parameters will be observed and collected:

- Downhole injection initiation and maintenance pressures;
- Injection pressure influence at surrounding monitoring points (if available);
- Ground surface heave adjacent to and in the vicinity of the injection point; and
- Visual observations during injection.

Detailed discussions of these operational parameters are provided below.

3.4.2.1 Injection Initiation and Maintenance Pressures

During each injection, a pressure transducer will be used to record data every 1/8 of a second. This data will be used to create a pressure-history curve from which the initiation pressure and the maintenance pressure can be determined. The initiation pressure represents the pressure at which the formation yields to the influx of injection fluids. The maintenance pressure represents the pressure required to maintain the injection flow into the formation. The graphical representation of this data plotted over time provides information on the in situ stresses of the formation corresponding to depth, as well as a confirmation that any fractures were created and propagated.

3.4.2.2 Pressure Influence at Adjacent Wells

During the injections, pressure gauges will be placed at wells near the injection points to monitor for pressure influence. Each pressure gauge is outfitted with a drag arm indicator that records the maximum pressure detected at the monitoring point during the injection.

3.4.2.3 Ground Surface Heave

Ground surface heave monitoring will be conducted during each injection using surveying transits in conjunction with heave rods. The heave rods will be placed at locations of varying radial distance from the fracture/injection well. During each injection event, the rods will be observed for the maximum amount of upward motion (surface heave) and the post-injection resting position (residual heave). Ground surface heave monitoring data provides additional information that can be used to assess the distances and orientation of injection fluid propagation. Due to the presence of an asphalt surface and building structures, heave is expected to be minimal.

1 **3.4.3 FeroxSM Injection Monitoring Parameters**

2 During the injection process, ARS personnel will monitor the quantity of slurry injected, as
3 well as the duration of injection. The quantity of slurry injected will be recorded after each
4 injection and measured by either counting the number of "strokes" of the diaphragm pump
5 or visually measuring the amount of liquid that is displaced from the slurry holding tank.
6 Typically, a single batch of iron powder slurry is mixed and injected at a time; therefore,
7 exact quantities are recorded during each injection event.

8 The injection pressure will also be observed to ensure proper operation of the system and
9 dispersion of ZVI powder into the formation. ARS personnel will keep record of these and
10 other operational parameters during the field activities.

11 **3.4.4 Injection Effects on Nearby Structures**

12 The PF process has been safely applied in the vicinity of and beneath a wide variety of
13 buildings. At SWMUs 25/70, it was safely applied beneath a 70-year-old building that was
14 in active use. As a conservative safety measure, an analysis of buildings in the vicinity of the
15 field operations is conducted prior to implementation to verify that subsurface injections
16 will have no impact on the integrity of the structures. The majority of the injections at
17 SWMU 39 will occur adjacent to existing Buildings 1608A and 1608B. Prior to mobilization,
18 a structural analysis will be performed based on the as-built drawings of the existing
19 buildings or other available information to assess potential impacts of PF on the structural
20 integrity of the buildings. During injections, the structures will be monitored for movement.
21 No significant building movement is expected to occur. However, if differential movement
22 of either building is greater than 0.5 inches, the injection event will be terminated and an
23 evaluation of viable delivery options will be completed in the field.

24 **3.4.5 Injection Well Installation**

25 Prior to drilling, each TTA location will be surveyed for utilities by CH2M-Jones. These
26 utilities will be marked on the surface for easy identification when positioning the drill rig
27 and applying injections.

28 To successfully deliver the ZVI powder into the subsurface at SWMU 39, boreholes need to
29 be drilled and stabilized in such a way that the injection equipment can be placed to the
30 desired depths and safely withdrawn when injections are complete. A Geoprobe® (or
31 similar push-brand) drill rig, capable of driving 4.5-inch OD casing, will be used to install
32 temporary casings for the injection equipment. Using the hydraulic push and hammering
33 capabilities of a Geoprobe® (or similar push-brand) drill rig, a 4.5-inch outer diameter,

1 threaded heavy-wall (HW) casing will be advanced to the targeted depth. This casing will
2 serve as a conduit for the ARS downhole injection equipment. Once the packer/nozzle
3 assembly is lowered inside the casing to the required depth, the OD casing will be raised
4 using a forklift, thereby exposing the packer and nozzle assembly to the formation. The
5 packer(s) is inflated against the formation using compressed nitrogen, providing a seal
6 above and, depending on the configuration, below the nozzle. Maintaining the casing above
7 the packers prevents borehole collapse on top of the downhole equipment. The hydraulics
8 on the hoist truck are sufficient to overcome any collapse that may occur around the nozzle
9 assembly before or after injections. Once the injection is complete and the designed dosage
10 of iron powder is emplaced into the subsurface formation, the nozzle is raised to the
11 subsequent shallower injection interval, and the entire process is repeated.

12 **3.5 Field Application**

13 During the initial days of ZVI injection, specific operational parameters will be observed,
14 recorded, and where applicable, optimized. These specific operational parameters include
15 material influence, ground surface heave, initiation and maintenance pressures, and
16 injection flow rates. In addition during these initial days of injection, the maximum
17 achievable iron dosage that can be delivered into the site soils will be evaluated. This
18 information will be used to correlate and refine the quantities of gas and ZVI at the
19 remaining injection points.

20 **3.5.1 Subsurface Soil Sampling**

21 Prior to injection well installation, soil cores will be collected at each location. A Geoprobe®
22 will be utilized to collect continuous cores from the Targeted Treatment Intervals (TTI). The
23 soil cores will be visually logged and screened in the field with a PID meter for soil vapors.
24 The soil boring logs will provide useful information in evaluating the lithology of the target
25 intervals.

26 **3.5.2 FeroxSM Injection Parameters**

27 The FeroxSM injections at each of the two TTAs will target a deep vertical interval
28 immediately above the top of the Ashley Formation. Injections in TTA 1A will focus on a
29 TTI of 8 ft. Injections will be initiated at a depth of 46 ft bls and terminated at 38 ft bls.
30 Injections within TTA 1B, with a TTI of 12 ft, will be initiated at a depth of 46 ft bls and
31 terminated at 34 ft bls.

1 The estimated quantity of ZVI injected in each TTA will be calculated by ARS and will be
2 based on the maximum contaminant concentrations and using a desirable iron-to-TCE ratio
3 of 2000:1 by weight. The actual injected mass of ZVI will depend greatly on site-specific
4 limitations, such as the extensiveness of interconnected soil pores and the volume of the iron
5 powder slurry that can be injected into the soils.

6 **3.5.3 Post-Injection Groundwater Monitoring**

7 Post-injection performance monitoring will be performed following completion of the
8 FeroxSM injections. The purpose of post-injection groundwater sampling will be to monitor
9 the rate of reduction of VOCs, as well as monitor changes in groundwater geochemical
10 parameters. Groundwater will be analyzed for VOCs, total and dissolved iron, pH, DO, and
11 ORP. These values will be compared to baseline values as a means to evaluate technology
12 performance.

13 Three new monitoring wells will be installed within the TTAs, as shown in Figure 3-1. after
14 injections are completed. The wells will have 10 ft of screen and be installed such that
15 bottom of the screen is approximately 2 ft above the top of the Ashley Formation. These
16 wells will be installed immediately after the ISCR has been completed so that they are not
17 impacted by the ISCR process. The wells will be sampled to establish immediate post-
18 injection conditions to evaluate performance. These wells will be sampled approximately 1
19 week after completion of the injections and quarterly for 1 year following completion of the
20 injection activities.

21 **3.5.4 Groundwater Monitoring Procedures**

22 Groundwater monitoring will be completed using a low-flow groundwater sampling
23 technique to collect accurate field parameters (particularly DO and ORP) and less disturbed
24 groundwater samples for the evaluation of dissolved gases. The intake of the low-flow
25 pump will be placed in the middle of the screened interval and purging will continue until
26 the basic groundwater parameters stabilize (pH, temperature, and specific conductance) or
27 until the well has been purged for 30 minutes.

28 The groundwater analysis will follow the procedures found in the approved
29 Comprehensive Sampling and Analysis Plan (CSAP) portion of the RFI Work Plan (EnSafe,
30 Inc./Allen & Hoshall, 1994). The CSAP outlines all monitoring procedures to be performed
31 during the pilot study to characterize the performance of the implemented remedial
32 alternative. In addition, the CSAP includes the Quality Assurance Plan (QAP) and Data
33 Management Plan (DMP) to verify that all information and data are valid and properly

1 documented. Unless otherwise noted, the sampling strategy and procedures will be
2 performed in accordance with the EPA Environmental Services Division *Standard Operating*
3 *Procedures and Quality Assurance Manual* (ESDSOPQAM) (1996).

4 **3.6 Permitting**

5 **3.6.1 SCDHEC Well Installation Request**

6 In accordance with R.61-79.265 Subpart F of the South Carolina Hazardous Waste
7 Management Regulations and R.61-71 of the South Carolina Well Standards and
8 Regulations, a request for the advancement of any additional monitoring wells or Geoprobe
9 borings is required to be submitted to South Carolina Department of Health and
10 Environmental Control (SCDHEC) 2 weeks prior to the scheduled activity. The written
11 request describes the purpose of the monitoring wells, injection wells and Geoprobe boring
12 activities and consists of construction details, if required, as well as a map depicting the
13 proposed locations. In addition, because the injection boreholes and Geoprobe locations are
14 considered temporary, the request will include a brief description of the method used for
15 abandonment.

16 **3.6.2 SCDHEC Underground Injection Control Permit Application**

17 An Underground Injection Control (UIC) Permit application will be prepared and submitted
18 to SCDHEC for approval. Field work, including advancement of the injection wells, will be
19 initiated after the UIC Permit application is approved by SCDHEC.

20 **3.7 Health and Safety Monitoring**

21 CH2M-Jones places significant emphasis on the health and safety of our personnel, our
22 subcontractors, and the local community. Once all personnel have arrived on site as part of
23 the mobilization phase of the IMWP, a project briefing and health and safety orientation
24 meeting will be held. All work completed as part of this IMWP will be performed in
25 accordance with the CH2M-Jones Site-Specific Health and Safety Plan (HASP) (CH2M-
26 Jones, 2000).

27 All field personnel are responsible for following the health and safety practices identified in
28 the CH2M-Jones HASP while performing the field activities in a safe and responsible
29 manner.

30 A copy of the MSDS for the ZVI powder is included in Appendix B.

TABLE 3-1
 Analytical Methods and Data Use
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Analysis	Method	Comments	Data Use	Field or Fixed-Base Laboratory
VOCs	SW-846 8260B	Determine extent of chlorinated VOC contamination.	Data will be used to evaluate potential remedial approach(es) to be field tested as part of pilot study	Fixed-base
Dissolved Oxygen*	DO Meter calibrated in the field according to the supplier's specifications		Concentrations < 0.5 mg/L generally indicate an anoxic pathway	Field
Ferrous Iron [FE(II)]	Colorimetric Hack Company Method 8146	Filter if turbidity interferes with analysis.	May indicate an iron-reducing environment	Field
Oxidation Reduction Potential (ORP)	ASTM Method A2580B	Measurements made with electrodes and meter; protect sample from oxygen. Report results against the hydrogen electrode (Eh) by adding a correction factor specific to the electrode used	The ORP of groundwater reflects the relative oxidizing or reducing nature of the groundwater system. ORP is influenced by the nature of the biologically mediated degradation of contaminants, and may range from 800 mV (oxygenated) to less than -400 (strongly reducing)	Field
pH	Field probe with direct-reading meter calibrated in the field according to the supplier's specifications		Aerobic and anoxic processes are pH-sensitive; abiotic reduction of chromium is pH – sensitive	Field
Temperature	Field Probe with direct-reading mater			Field
Conductivity	E120.1/SW-846 Method 9050, direct meter reading		General water quality parameters used as a marker to verify that site samples are obtained from the groundwater system	Field

TABLE 3-1
 Analytical Methods and Data Use
 Phase II Interim Measure Work Plan, SWMU 39, Zone A, Charleston Naval Complex

Analysis	Method	Comments	Data Use	Field or Fixed-Base Laboratory
* mg/L	Table entries that are highlighted in gray represent MNA parameters. milligram per liter			

NOTE: Original figure created in color

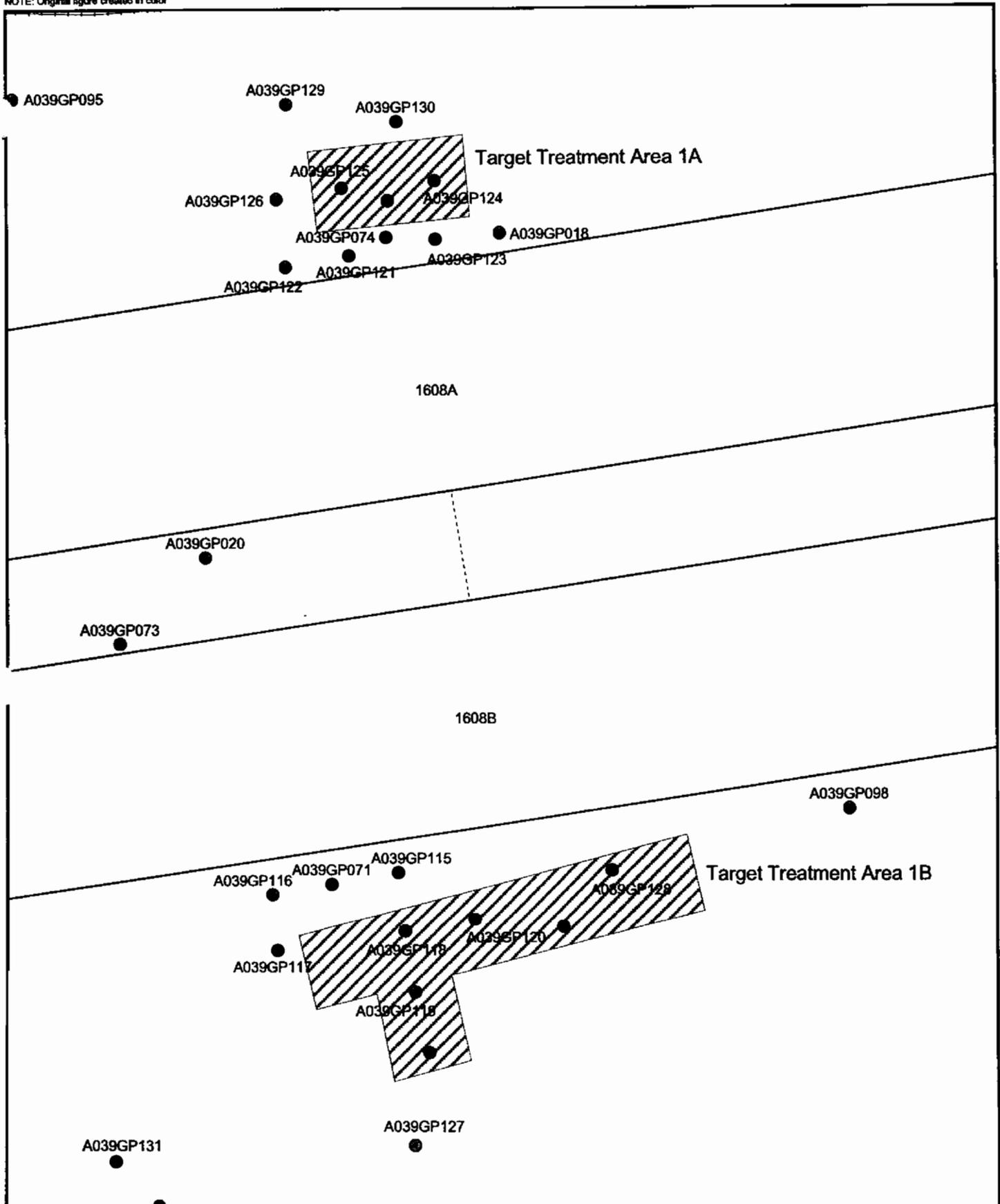


Figure 3-1
In-situ Chemical Reduction
Approximate Target Treatment Areas
SWMU 39, Zone A
Charleston Naval Complex

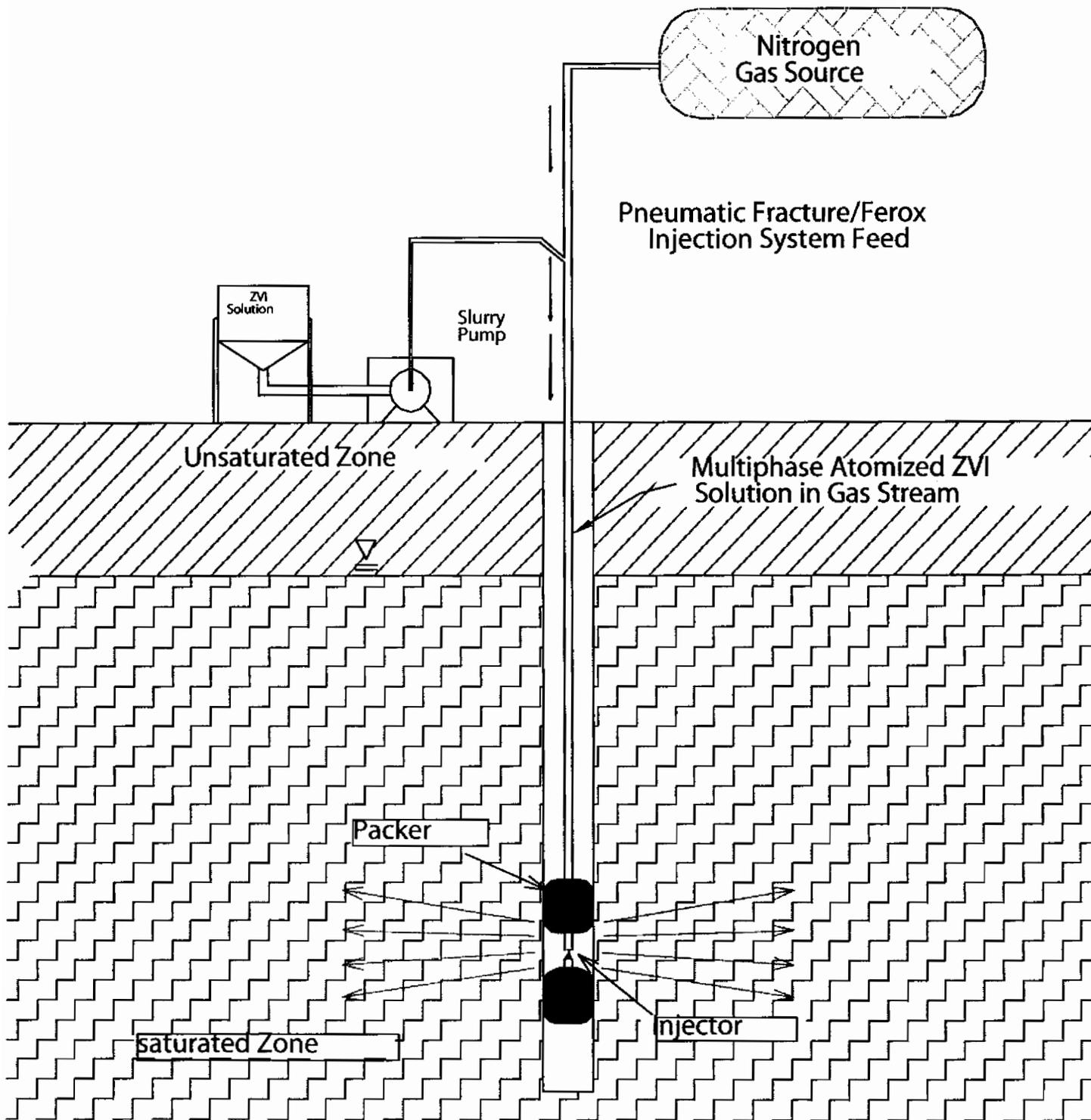


Figure 3-2
 Schematic of ZVI Injection Setup
 SWMU 39, Zone A
 Charleston Naval Complex
 Source: ARS Technologies, Inc.

1 **4.0 Investigation-Derived Waste**

2 IDW that is generated during this effort will include purge water from the groundwater
3 sampling activities, soil cuttings from injector installation, and personal protective
4 equipment (PPE). IDW will be collected in labeled 55-gallon drums or portable tanks for
5 proper handling. Contained IDW will remain on site temporarily until it is transported to
6 the less-than-90-day storage facility located at Building 1824 in the CNC. Once the analytical
7 results have been reviewed, the 55-gallon drums or portable tank containing the
8 groundwater contents will be transported, as required, to a permitted and licensed facility
9 for treatment or disposal.

Section 5.0

5.0 Project Schedule

Implementing the ISCR project consists of four primary tasks. These primary tasks and their anticipated duration are provided below.

1. Pre-Construction Deliverables and Contracts – 2 Months
2. ISCR Field Activities – 3 Weeks
3. Phase II Interim Measure Completion Report – 1 Month
4. Post-Injection Sampling and Analysis – 1 Year

Pre-construction deliverables and contracts include SCDHEC approval of this IMWP; preparation and approval of the well request for both the temporary injector locations and the three proposed monitoring wells; preparation, submittal, and subsequent approval of the UIC permit application; and subcontractor contract preparation.

ISCR field activities include identifying and marking underground utilities; subcontractor mobilization and equipment set up; ZVI injection; and equipment decontamination, demobilization, and site restoration.

The post-injection sampling and analysis includes performance monitoring of the three proposed monitoring wells approximately 1 week after completion of the injections and quarterly for 1 year following completion of the injection activities.

1 **6.0 References**

- 2 ARS Technologies, Inc. *Final FeroxSM Field Implementation Work Plan, SWMU 166, Charleston*
3 *Naval Complex*. December 2001.
- 4 CH2M-Jones. *Corrective Measures Study Report for SWMU 39, Zone A*. Revision 0. October 4,
5 2002a.
- 6 CH2M-Jones. *Corrective Measures Study Work Plan for SWMU 39, Zone A*. Revision 0. March
7 29, 2002b.
- 8 CH2M-Jones. *Phase I Interim Measure Work Plan (IMWP) for SWMU 39, Zone A, Revision 0*.
9 September 2003.
- 10 CH2M-Jones. *Site-Specific Health and Safety Plan (HASP)*. 2000.
- 11 EnSafe Inc. *Zone A RCRA Facility Investigation Report, NAVBASE Charleston*. Revision 0.
12 August 7, 1998.
- 13 EnSafe Inc./Allen & Hoshall. *Final Comprehensive RFI Work Plan*. May 31, 1994.
- 14 U.S. Environmental Protection Agency (EPA). *Standard Operating Procedures and Quality*
15 *Assurance Manual (ESDSOPQAM)*. EPA Region IV, Environmental Services Division. 1996.

Analytical Data Summary

03/24/2004 ...19 AM

StationID	A039GP115		A039GP115		A039GP115		
SampleID	039GP115-I		039GP115D1		039GP115D2		
DateCollected	09/30/2003		09/30/2003		09/30/2003		
DateExtracted	10/03/2003		10/03/2003		10/03/2003		
DateAnalyzed	10/03/2003		10/03/2003		10/03/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Chloromethane	ug/L	10	UJ	10	UJ	10	UJ
Vinyl chloride	ug/L	10	U	1.6	J	10	U
Bromomethane	ug/L	10	U	10	U	10	U
Chloroethane	ug/L	10	U	10	U	10	U
1,1-Dichloroethene	ug/L	5	U	5	U	5	U
Acetone	ug/L	3.9	J	4.2	J	43.7	J
Carbon Disulfide	ug/L	5	U	5	U	5	U
Methylene Chloride	ug/L	5	U	5	U	5	U
trans-1,2-Dichloroethene	ug/L	5	U	5	U	5	U
1,1-Dichloroethane	ug/L	5	U	5	U	5	U
Vinyl acetate	ug/L	10	U	10	U	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	9.5	J
cis-1,2-Dichloroethylene	ug/L	2.1	J	62.8	=	5.8	=
1,2-Dichloroethene (total)	ug/L	2.1	J	62.8	=	5.8	=
Chloroform	ug/L	5	U	5	U	5	U
1,1,1-Trichloroethane	ug/L	5	U	5	U	5	U
Carbon Tetrachloride	ug/L	5	U	5	U	5	U
1,2-Dichloroethane	ug/L	5	U	5	U	5	U
Benzene	ug/L	5	U	0.46	J	0.58	J
Trichloroethylene (TCE)	ug/L	0.76	J	47.3	=	1.7	J
1,2-Dichloropropane	ug/L	5	U	5	U	5	U
Bromodichloromethane	ug/L	5	U	5	U	5	U
2-Chloroethyl vinyl ether	ug/L	10	R	10	UJ	10	UJ
cis-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	10	U
Toluene	ug/L	5	U	5	U	0.77	J
trans-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
1,1,2-Trichloroethane	ug/L	5	U	5	U	5	U
2-Hexanone	ug/L	10	U	10	U	10	U
Tetrachloroethylene (PCE)	ug/L	5	U	5	U	5	U

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP116		A039GP116		A039GP116		
SampleID	039GP116-I		039GP116D1		039GP116D2		
DateCollected	09/30/2003		09/30/2003		09/30/2003		
DateExtracted	10/03/2003		10/03/2003		10/03/2003		
DateAnalyzed	10/03/2003		10/03/2003		10/03/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Chloromethane	ug/L	10	UJ	10	UJ	10	UJ
Vinyl chloride	ug/L	0.96	J	3.8	J	3.2	J
Bromomethane	ug/L	10	U	10	U	10	U
Chloroethane	ug/L	10	U	10	U	10	U
1,1-Dichloroethene	ug/L	5	U	5	U	5	U
Acetone	ug/L	4	J	3.9	J	3.5	J
Carbon Disulfide	ug/L	5	U	5	U	5	U
Methylene Chloride	ug/L	5	U	5	U	5	U
trans-1,2-Dichloroethene	ug/L	5	U	0.44	J	5	U
1,1-Dichloroethane	ug/L	5	U	1.1	J	1	J
Vinyl acetate	ug/L	10	U	10	U	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	10	U
cis-1,2-Dichloroethylene	ug/L	24.3	=	66.6	=	68.5	=
1,2-Dichloroethene (total)	ug/L	24.3	=	67	=	68.5	=
Chloroform	ug/L	5	U	5	U	5	U
1,1,1-Trichloroethane	ug/L	5	U	5	U	5	U
Carbon Tetrachloride	ug/L	5	U	5	U	5	U
1,2-Dichloroethane	ug/L	5	U	5	U	5	U
Benzene	ug/L	5	U	5	U	5	U
Trichloroethylene (TCE)	ug/L	7.6	=	18.1	=	17.3	=
1,2-Dichloropropane	ug/L	5	U	5	U	5	U
Bromodichloromethane	ug/L	5	U	5	U	5	U
2-Chloroethyl vinyl ether	ug/L	10	UJ	10	UJ	10	UJ
cis-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	10	U
Toluene	ug/L	5	U	5	U	5	U
trans-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
1,1,2-Trichloroethane	ug/L	5	U	5	U	5	U
2-Hexanone	ug/L	10	U	10	U	10	U
Tetrachloroethylene (PCE)	ug/L	5	U	5	U	5	U

Analytical Data Summary

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StationID	A039GP116		A039GP116		A039GP117		
SampleID	039GP116D3		039GP116D3DL		039GP117-I		
DateCollected	09/30/2003		09/30/2003		10/01/2003		
DateExtracted	10/03/2003		10/04/2003		10/03/2003		
DateAnalyzed	10/03/2003		10/04/2003		10/03/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Chloromethane	ug/L	10	UJ	50	R	10	UJ
Vinyl chloride	ug/L	10.5	=	10.8	R	5.1	J
Bromomethane	ug/L	10	U	50	R	10	U
Chloroethane	ug/L	10	U	50	R	10	U
1,1-Dichloroethene	ug/L	3.8	J	3.6	R	5	U
Acetone	ug/L	10	U	50	R	10	U
Carbon Disulfide	ug/L	5	U	25	R	5	U
Methylene Chloride	ug/L	5	U	25	R	5	U
trans-1,2-Dichloroethene	ug/L	1.3	J	25	R	0.7	J
1,1-Dichloroethane	ug/L	3	J	25	R	1.6	J
Vinyl acetate	ug/L	10	U	50	R	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	50	R	10	U
cis-1,2-Dichloroethylene	ug/L	193	R	183	=	110	R
1,2-Dichloroethene (total)	ug/L	195	R	183	=	111	R
Chloroform	ug/L	5	U	25	R	5	U
1,1,1-Trichloroethane	ug/L	5	U	25	R	5	U
Carbon Tetrachloride	ug/L	5	U	25	R	5	U
1,2-Dichloroethane	ug/L	5	U	25	R	5	U
Benzene	ug/L	0.54	J	25	R	0.38	J
Trichloroethylene (TCE)	ug/L	56.1	=	53.2	R	40.6	=
1,2-Dichloropropane	ug/L	5	U	25	R	5	U
Bromodichloromethane	ug/L	5	U	25	R	5	U
2-Chloroethyl vinyl ether	ug/L	10	UJ	50	R	10	UJ
cis-1,3-Dichloropropene	ug/L	5	U	25	R	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	50	R	10	U
Toluene	ug/L	5	U	25	R	5	U
trans-1,3-Dichloropropene	ug/L	5	U	25	R	5	U
1,1,2-Trichloroethane	ug/L	5	U	25	R	5	U
2-Hexanone	ug/L	10	U	50	R	10	U
Tetrachloroethylene (PCE)	ug/L	0.84	J	25	R	5	U

Analytical Data Summary

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StationID	A039GP117		A039GP117		A039GP117		
SampleID	039GP117-IDL		039GP117D1		039GP117D1DL		
DateCollected	10/01/2003		10/01/2003		10/01/2003		
DateExtracted	10/04/2003		10/03/2003		10/04/2003		
DateAnalyzed	10/04/2003		10/03/2003		10/04/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Chloromethane	ug/L	20	R	10	UJ	100	R
Vinyl chloride	ug/L	4.6	R	22.2	=	20.1	R
Bromomethane	ug/L	20	R	10	U	100	R
Chloroethane	ug/L	20	R	10	U	100	R
1,1-Dichloroethene	ug/L	2.5	R	10	=	8.5	R
Acetone	ug/L	20	R	10	U	100	R
Carbon Disulfide	ug/L	10	R	5	U	50	R
Methylene Chloride	ug/L	10	R	5	U	50	R
trans-1,2-Dichloroethene	ug/L	10	R	3	J	50	R
1,1-Dichloroethane	ug/L	10	R	7.5	=	50	R
Vinyl acetate	ug/L	20	R	10	U	100	R
Methyl ethyl ketone (2-Butanone)	ug/L	20	R	10	U	100	R
cis-1,2-Dichloroethylene	ug/L	109	=	536	R	464	=
1,2-Dichloroethene (total)	ug/L	109	=	539	R	464	=
Chloroform	ug/L	10	R	5	U	50	R
1,1,1-Trichloroethane	ug/L	10	R	5	U	50	R
Carbon Tetrachloride	ug/L	10	R	5	U	50	R
1,2-Dichloroethane	ug/L	10	R	5	U	50	R
Benzene	ug/L	10	R	2.1	J	50	R
Trichloroethylene (TCE)	ug/L	40.2	R	293	R	241	=
1,2-Dichloropropane	ug/L	10	R	5	U	50	R
Bromodichloromethane	ug/L	10	R	5	U	50	R
2-Chloroethyl vinyl ether	ug/L	20	R	10	UJ	100	R
cis-1,3-Dichloropropene	ug/L	10	R	5	U	50	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	20	R	10	U	100	R
Toluene	ug/L	10	R	0.43	J	50	R
trans-1,3-Dichloropropene	ug/L	10	R	5	U	50	R
1,1,2-Trichloroethane	ug/L	10	R	5	U	50	R
2-Hexanone	ug/L	20	R	10	U	100	R
Tetrachloroethylene (PCE)	ug/L	10	R	4.1	J	50	R

Analytical Data Summary

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StationID	A039GP117		A039GP117		A039GP117		
SampleID	039GP117D2		039GP117D2DL		039GP117D3		
DateCollected	10/01/2003		10/01/2003		10/01/2003		
DateExtracted	10/03/2003		10/04/2003		10/03/2003		
DateAnalyzed	10/03/2003		10/04/2003		10/03/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Chloromethane	ug/L	10	UJ	100	R	10	UJ
Vinyl chloride	ug/L	32.2	=	30.8	R	29.5	=
Bromomethane	ug/L	10	U	100	R	10	U
Chloroethane	ug/L	10	U	100	R	10	U
1,1-Dichloroethene	ug/L	11.1	=	11.1	R	10.3	=
Acetone	ug/L	10	U	100	R	4	J
Carbon Disulfide	ug/L	5	U	50	R	5	U
Methylene Chloride	ug/L	5	U	50	R	5	U
trans-1,2-Dichloroethene	ug/L	4.8	J	50	R	3.4	J
1,1-Dichloroethane	ug/L	8.9	=	50	R	8.3	=
Vinyl acetate	ug/L	10	U	100	R	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	100	R	10	U
cis-1,2-Dichloroethylene	ug/L	643	R	554	=	601	R
1,2-Dichloroethene (total)	ug/L	648	R	554	=	604	R
Chloroform	ug/L	5	U	50	R	5	U
1,1,1-Trichloroethane	ug/L	5	U	50	R	5	U
Carbon Tetrachloride	ug/L	5	U	50	R	5	U
1,2-Dichloroethane	ug/L	5	U	50	R	5	U
Benzene	ug/L	2.1	J	50	R	1.9	J
Trichloroethylene (TCE)	ug/L	285	R	245	=	250	R
1,2-Dichloropropane	ug/L	5	U	50	R	5	U
Bromodichloromethane	ug/L	5	U	50	R	5	U
2-Chloroethyl vinyl ether	ug/L	10	UJ	100	R	10	UJ
cis-1,3-Dichloropropene	ug/L	5	U	50	R	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	100	R	10	U
Toluene	ug/L	0.61	J	50	R	0.45	J
trans-1,3-Dichloropropene	ug/L	5	U	50	R	5	U
1,1,2-Trichloroethane	ug/L	5	U	50	R	5	U
2-Hexanone	ug/L	10	U	100	R	10	U
Tetrachloroethylene (PCE)	ug/L	4.4	J	50	R	3.7	J

Analytical Data Summary

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	StationID	A039GP117		A039GP117		A039GP118	
	SampleID	039GP117D3DL		039HP117-IDL		039GP118-I	
	DateCollected	10/01/2003		10/01/2003		10/01/2003	
	DateExtracted	10/04/2003		10/04/2003		10/04/2003	
	DateAnalyzed	10/04/2003		10/04/2003		10/04/2003	
	SDGNumber	89179		89179		89179	
Parameter	Units						
Chloromethane	ug/L	100	R	20	R	10	UJ
Vinyl chloride	ug/L	26.1	R	4.6	R	1.2	J
Bromomethane	ug/L	100	R	20	R	10	U
Chloroethane	ug/L	100	R	20	R	10	U
1,1-Dichloroethene	ug/L	10.4	R	2.4	R	5	U
Acetone	ug/L	100	R	20	R	2.9	J
Carbon Disulfide	ug/L	50	R	10	R	5	U
Methylene Chloride	ug/L	50	R	10	R	5	U
trans-1,2-Dichloroethene	ug/L	50	R	10	R	5	U
1,1-Dichloroethane	ug/L	50	R	10	R	5	U
Vinyl acetate	ug/L	100	R	20	R	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	100	R	20	R	10	U
cis-1,2-Dichloroethylene	ug/L	530	=	104	=	36.6	=
1,2-Dichloroethene (total)	ug/L	530	=	104	=	36.6	=
Chloroform	ug/L	50	R	10	R	5	U
1,1,1-Trichloroethane	ug/L	50	R	10	R	5	U
Carbon Tetrachloride	ug/L	50	R	10	R	5	U
1,2-Dichloroethane	ug/L	50	R	10	R	5	U
Benzene	ug/L	50	R	10	R	5	U
Trichloroethylene (TCE)	ug/L	218	=	37.6	R	10.8	=
1,2-Dichloropropane	ug/L	50	R	10	R	5	U
Bromodichloromethane	ug/L	50	R	10	R	5	U
2-Chloroethyl vinyl ether	ug/L	100	R	20	R	10	UJ
cis-1,3-Dichloropropene	ug/L	50	R	10	R	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	100	R	20	R	10	U
Toluene	ug/L	50	R	10	R	5	U
trans-1,3-Dichloropropene	ug/L	50	R	10	R	5	U
1,1,2-Trichloroethane	ug/L	50	R	10	R	5	U
2-Hexanone	ug/L	100	R	20	R	10	U
Tetrachloroethylene (PCE)	ug/L	50	R	10	R	5	U

Analytical Data Summary

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StationID	A039GP118		A039GP118		A039GP118		
SampleID	039GP118D1		039GP118D1DL		039GP118D2		
DateCollected	10/01/2003		10/01/2003		10/01/2003		
DateExtracted	10/03/2003		10/04/2003		10/03/2003		
DateAnalyzed	10/03/2003		10/04/2003		10/03/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Chloromethane	ug/L	10	UJ	100	R	10	UJ
Vinyl chloride	ug/L	14	=	14.2	R	27.1	=
Bromomethane	ug/L	10	U	100	R	10	U
Chloroethane	ug/L	10	U	100	R	10	U
1,1-Dichloroethene	ug/L	8.6	=	8.3	R	12.4	=
Acetone	ug/L	10	U	100	R	10	U
Carbon Disulfide	ug/L	5	U	50	R	5	U
Methylene Chloride	ug/L	5	U	50	R	5	U
trans-1,2-Dichloroethene	ug/L	2.7	J	50	R	3.8	J
1,1-Dichloroethane	ug/L	4.9	J	50	R	8.6	=
Vinyl acetate	ug/L	10	U	100	R	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	100	R	10	U
cis-1,2-Dichloroethylene	ug/L	406	R	372	=	719	R
1,2-Dichloroethene (total)	ug/L	408	R	372	=	723	R
Chloroform	ug/L	5	U	50	R	5	U
1,1,1-Trichloroethane	ug/L	5	U	50	R	5	U
Carbon Tetrachloride	ug/L	5	U	50	R	5	U
1,2-Dichloroethane	ug/L	5	U	50	R	5	U
Benzene	ug/L	2.1	J	50	R	3.1	J
Trichloroethylene (TCE)	ug/L	416	R	333	=	514	R
1,2-Dichloropropane	ug/L	5	U	50	R	5	U
Bromodichloromethane	ug/L	5	U	50	R	5	U
2-Chloroethyl vinyl ether	ug/L	10	UJ	100	R	10	UJ
cis-1,3-Dichloropropene	ug/L	5	U	50	R	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	100	R	10	U
Toluene	ug/L	5	U	50	R	5	U
trans-1,3-Dichloropropene	ug/L	5	U	50	R	5	U
1,1,2-Trichloroethane	ug/L	5	U	50	R	5	U
2-Hexanone	ug/L	10	U	100	R	10	U
Tetrachloroethylene (PCE)	ug/L	1.9	J	50	R	2.5	J

Analytical Data Summary

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StationID	A039GP118		A039GP118		A039GP118		
SampleID	039GP118D2DL		039GP118D3		039GP118D3DL		
DateCollected	10/01/2003		10/01/2003		10/01/2003		
DateExtracted	10/04/2003		10/03/2003		10/04/2003		
DateAnalyzed	10/04/2003		10/03/2003		10/04/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Chloromethane	ug/L	200	R	10	UJ	200	R
Vinyl chloride	ug/L	27.8	R	34.7	=	29.9	R
Bromomethane	ug/L	200	R	10	U	200	R
Chloroethane	ug/L	200	R	10	U	200	R
1,1-Dichloroethene	ug/L	13.2	R	15.1	=	100	R
Acetone	ug/L	200	R	10	U	200	R
Carbon Disulfide	ug/L	100	R	5	U	100	R
Methylene Chloride	ug/L	100	R	5	U	100	R
trans-1,2-Dichloroethene	ug/L	100	R	4.8	J	100	R
1,1-Dichloroethane	ug/L	100	R	10.4	=	100	R
Vinyl acetate	ug/L	200	R	10	U	200	R
Methyl ethyl ketone (2-Butanone)	ug/L	200	R	10	U	200	R
cis-1,2-Dichloroethylene	ug/L	656	=	894	R	705	=
1,2-Dichloroethene (total)	ug/L	656	=	899	R	705	=
Chloroform	ug/L	100	R	5	U	100	R
1,1,1-Trichloroethane	ug/L	100	R	5	U	100	R
Carbon Tetrachloride	ug/L	100	R	5	U	100	R
1,2-Dichloroethane	ug/L	100	R	5	U	100	R
Benzene	ug/L	100	R	3.7	J	100	R
Trichloroethylene (TCE)	ug/L	458	=	628	R	490	=
1,2-Dichloropropane	ug/L	100	R	5	U	100	R
Bromodichloromethane	ug/L	100	R	5	U	100	R
2-Chloroethyl vinyl ether	ug/L	200	R	10	UJ	200	R
cis-1,3-Dichloropropene	ug/L	100	R	5	U	100	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	200	R	10	U	200	R
Toluene	ug/L	100	R	5	U	100	R
trans-1,3-Dichloropropene	ug/L	100	R	5	U	100	R
1,1,2-Trichloroethane	ug/L	100	R	5	U	100	R
2-Hexanone	ug/L	200	R	10	U	200	R
Tetrachloroethylene (PCE)	ug/L	100	R	3.6	J	100	R

Analytical Data Summary

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StationID	A039GP119		A039GP119		A039GP119		
SampleID	039GP119-I		039GP119D1		039GP119D2		
DateCollected	10/07/2003		10/07/2003		10/07/2003		
DateExtracted	10/10/2003		10/10/2003		10/10/2003		
DateAnalyzed	10/10/2003		10/10/2003		10/10/2003		
SDGNumber	89573		89573		89573		
Parameter	Units						
Chloromethane	ug/L	10	UJ	20	U	50	U
Vinyl chloride	ug/L	10	UJ	20	U	6.2	J
Bromomethane	ug/L	10	UJ	20	UJ	50	UJ
Chloroethane	ug/L	10	UJ	20	U	50	U
1,1-Dichloroethene	ug/L	0.44	J	2.4	J	10.8	J
Acetone	ug/L	4.1	J	4.7	J	50	U
Carbon Disulfide	ug/L	5	UJ	10	U	25	U
Methylene Chloride	ug/L	5	UJ	10	U	25	U
trans-1,2-Dichloroethene	ug/L	5	UJ	10	U	25	U
1,1-Dichloroethane	ug/L	5	UJ	10	U	5.5	J
Vinyl acetate	ug/L	10	UJ	20	U	50	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	UJ	20	U	50	U
cis-1,2-Dichloroethylene	ug/L	21.7	J	64.9	=	452	=
1,2-Dichloroethene (total)	ug/L	21.7	J	64.9	=	452	=
Chloroform	ug/L	5	UJ	10	U	25	U
1,1,1-Trichloroethane	ug/L	5	UJ	10	U	25	U
Carbon Tetrachloride	ug/L	5	UJ	10	U	25	U
1,2-Dichloroethane	ug/L	5	UJ	10	U	25	U
Benzene	ug/L	5	UJ	10	U	3.3	J
Trichloroethylene (TCE)	ug/L	7.2	J	137	=	721	R
1,2-Dichloropropane	ug/L	5	UJ	10	U	25	U
Bromodichloromethane	ug/L	5	UJ	10	U	25	U
2-Chloroethyl vinyl ether	ug/L	10	UJ	20	U	50	U
cis-1,3-Dichloropropene	ug/L	5	UJ	10	U	25	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	UJ	20	U	50	U
Toluene	ug/L	5	UJ	10	U	25	U
trans-1,3-Dichloropropene	ug/L	5	UJ	10	U	25	U
1,1,2-Trichloroethane	ug/L	5	UJ	10	U	25	U
2-Hexanone	ug/L	10	UJ	20	U	50	U
Tetrachloroethylene (PCE)	ug/L	5	UJ	10	U	25	U

Analytical Data Summary

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StationID	A039GP119		A039GP119		A039GP120		
SampleID	039GP119D2DL		039GP119D3		039GP120-I		
DateCollected	10/07/2003		10/07/2003		10/07/2003		
DateExtracted	10/09/2003		10/09/2003		10/10/2003		
DateAnalyzed	10/09/2003		10/09/2003		10/10/2003		
SDGNumber	89573		89573		89573		
Parameter	Units						
Chloromethane	ug/L	100	R	100	U	10	U
Vinyl chloride	ug/L	100	R	100	U	0.7	J
Bromomethane	ug/L	100	R	100	UJ	10	UJ
Chloroethane	ug/L	100	R	100	U	10	U
1,1-Dichloroethene	ug/L	8.4	R	10.1	J	0.79	J
Acetone	ug/L	100	R	100	U	2.6	J
Carbon Disulfide	ug/L	50	R	50	U	5	U
Methylene Chloride	ug/L	50	R	50	U	5	U
trans-1,2-Dichloroethene	ug/L	50	R	3.8	J	5	U
1,1-Dichloroethane	ug/L	4.5	R	5.7	J	5	U
Vinyl acetate	ug/L	100	R	100	U	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	100	R	100	U	10	U
cis-1,2-Dichloroethylene	ug/L	448	R	467	=	38.8	=
1,2-Dichloroethene (total)	ug/L	448	R	471	=	38.8	=
Chloroform	ug/L	50	R	50	U	5	U
1,1,1-Trichloroethane	ug/L	50	R	50	U	5	U
Carbon Tetrachloride	ug/L	50	R	50	U	5	U
1,2-Dichloroethane	ug/L	50	R	50	U	5	U
Benzene	ug/L	50	R	3.6	J	5	U
Trichloroethylene (TCE)	ug/L	700	=	795	=	24.6	=
1,2-Dichloropropane	ug/L	50	R	50	U	5	U
Bromodichloromethane	ug/L	50	R	50	U	5	U
2-Chloroethyl vinyl ether	ug/L	100	R	100	U	10	R
cis-1,3-Dichloropropene	ug/L	50	R	50	U	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	100	R	100	U	10	U
Toluene	ug/L	50	R	50	U	5	U
trans-1,3-Dichloropropene	ug/L	50	R	50	U	5	U
1,1,2-Trichloroethane	ug/L	50	R	50	U	5	U
2-Hexanone	ug/L	100	R	100	U	10	U
Tetrachloroethylene (PCE)	ug/L	50	R	50	U	5	U

Analytical Data Summary

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StationID	A039GP120	A039GP120	A039GP120
SampleID	039GP120D1	039GP120D2	039GP120D2DL
DateCollected	10/07/2003	10/07/2003	10/07/2003
DateExtracted	10/10/2003	10/10/2003	10/09/2003
DateAnalyzed	10/10/2003	10/10/2003	10/09/2003
SDGNumber	89573	89573	89573

Parameter	Units						
Chloromethane	ug/L	10	U	10	U	100	R
Vinyl chloride	ug/L	10	U	1.8	J	100	R
Bromomethane	ug/L	10	UJ	10	UJ	100	R
Chloroethane	ug/L	10	U	10	U	100	R
1,1-Dichloroethene	ug/L	0.8	J	1.9	J	50	R
Acetone	ug/L	2.8	J	15.2	J	100	R
Carbon Disulfide	ug/L	5	U	5	U	50	R
Methylene Chloride	ug/L	5	UJ	5	UJ	50	R
trans-1,2-Dichloroethene	ug/L	0.39	J	0.44	J	50	R
1,1-Dichloroethane	ug/L	5	U	1.6	J	50	R
Vinyl acetate	ug/L	10	U	10	U	100	R
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	100	R
cis-1,2-Dichloroethylene	ug/L	34.6	=	106	J	47	R
1,2-Dichloroethene (total)	ug/L	35	=	107	=	47	R
Chloroform	ug/L	5	U	5	U	50	R
1,1,1-Trichloroethane	ug/L	5	U	5	U	50	R
Carbon Tetrachloride	ug/L	5	U	5	U	50	R
1,2-Dichloroethane	ug/L	5	U	5	U	50	R
Benzene	ug/L	5	U	0.72	J	50	R
Trichloroethylene (TCE)	ug/L	39.9	=	86	=	55.1	R
1,2-Dichloropropane	ug/L	5	U	5	U	50	R
Bromodichloromethane	ug/L	5	U	5	U	50	R
2-Chloroethyl vinyl ether	ug/L	10	U	10	U	100	R
cis-1,3-Dichloropropene	ug/L	5	U	5	U	50	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	100	R
Toluene	ug/L	5	U	5	U	50	R
trans-1,3-Dichloropropene	ug/L	5	U	5	U	50	R
1,1,2-Trichloroethane	ug/L	5	U	5	U	50	R
2-Hexanone	ug/L	10	U	10	U	100	R
Tetrachloroethylene (PCE)	ug/L	5	U	5	U	50	R

Analytical Data Summary

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StationID	A039GP120		A039GP121		A039GP121		
SampleID	039GP120D3		039GP121-I		039GP121D1		
DateCollected	10/08/2003		10/09/2003		10/09/2003		
DateExtracted	10/10/2003		10/16/2003		10/16/2003		
DateAnalyzed	10/10/2003		10/16/2003		10/16/2003		
SDGNumber	89573		89993		89993		
Parameter	Units						
Chloromethane	ug/L	100	U	10	UJ	10	U
Vinyl chloride	ug/L	23.9	J	10	UJ	10	U
Bromomethane	ug/L	100	UJ	10	UJ	10	UJ
Chloroethane	ug/L	100	U	10	UJ	10	U
1,1-Dichloroethene	ug/L	16.6	J	5	UJ	5	U
Acetone	ug/L	100	U	2.8	J	10	U
Carbon Disulfide	ug/L	50	U	5	UJ	5	U
Methylene Chloride	ug/L	50	U	5	UJ	5	U
trans-1,2-Dichloroethene	ug/L	5.2	J	5	UJ	5	U
1,1-Dichloroethane	ug/L	12.4	J	5	UJ	5	U
Vinyl acetate	ug/L	100	U	10	UJ	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	100	U	10	UJ	10	U
cis-1,2-Dichloroethylene	ug/L	835	=	0.4	J	4.1	J
1,2-Dichloroethene (total)	ug/L	840	=	0.4	J	4.1	J
Chloroform	ug/L	50	U	5	UJ	5	U
1,1,1-Trichloroethane	ug/L	50	U	5	UJ	5	U
Carbon Tetrachloride	ug/L	50	U	5	UJ	5	U
1,2-Dichloroethane	ug/L	16.2	J	5	UJ	5	U
Benzene	ug/L	5	J	5	UJ	5	U
Trichloroethylene (TCE)	ug/L	748	=	5	UJ	1.5	J
1,2-Dichloropropane	ug/L	50	U	5	UJ	5	U
Bromodichloromethane	ug/L	50	U	5	UJ	5	U
2-Chloroethyl vinyl ether	ug/L	100	U	10	UJ	10	U
cis-1,3-Dichloropropene	ug/L	50	U	5	UJ	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	100	U	10	UJ	10	U
Toluene	ug/L	50	U	5	UJ	5	U
trans-1,3-Dichloropropene	ug/L	50	U	5	UJ	5	U
1,1,2-Trichloroethane	ug/L	50	U	5	UJ	5	U
2-Hexanone	ug/L	100	U	10	UJ	10	U
Tetrachloroethylene (PCE)	ug/L	19	J	5	UJ	5	U

Analytical Data Summary

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StationID	A039GP121		A039GP121		A039GP121		
SampleID	039GP121D2		039GP121D2DL		039GP121D3		
DateCollected	10/09/2003		10/09/2003		10/09/2003		
DateExtracted	10/16/2003		10/17/2003		10/16/2003		
DateAnalyzed	10/16/2003		10/17/2003		10/16/2003		
SDGNumber	89993		89993		89993		
Parameter	Units						
Chloromethane	ug/L	10	UJ	100	R	10	UJ
Vinyl chloride	ug/L	21.8	J	18.2	R	29.6	J
Bromomethane	ug/L	10	UJ	100	R	10	UJ
Chloroethane	ug/L	10	UJ	100	R	10	UJ
1,1-Dichloroethene	ug/L	8.7	J	7	R	11.8	J
Acetone	ug/L	2.9	J	100	R	5	J
Carbon Disulfide	ug/L	5	UJ	50	R	5	UJ
Methylene Chloride	ug/L	5	UJ	50	R	5	UJ
trans-1,2-Dichloroethene	ug/L	5.5	J	5.4	R	7.5	J
1,1-Dichloroethane	ug/L	6.4	J	50	R	8.7	J
Vinyl acetate	ug/L	10	UJ	100	R	10	UJ
Methyl ethyl ketone (2-Butanone)	ug/L	10	UJ	100	R	10	UJ
cis-1,2-Dichloroethylene	ug/L	463	R	448	=	571	R
1,2-Dichloroethene (total)	ug/L	468	R	453	=	578	R
Chloroform	ug/L	5	UJ	50	R	5	UJ
1,1,1-Trichloroethane	ug/L	5	UJ	50	R	5	UJ
Carbon Tetrachloride	ug/L	5	UJ	50	R	5	UJ
1,2-Dichloroethane	ug/L	5	UJ	50	R	5	UJ
Benzene	ug/L	0.73	J	50	R	0.76	J
Trichloroethylene (TCE)	ug/L	81.3	J	76.8	R	141	R
1,2-Dichloropropane	ug/L	5	UJ	50	R	5	UJ
Bromodichloromethane	ug/L	5	UJ	50	R	5	UJ
2-Chloroethyl vinyl ether	ug/L	10	UJ	100	R	10	UJ
cis-1,3-Dichloropropene	ug/L	5	UJ	50	R	5	UJ
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	UJ	100	R	10	UJ
Toluene	ug/L	5	UJ	50	R	5	UJ
trans-1,3-Dichloropropene	ug/L	5	UJ	50	R	5	UJ
1,1,2-Trichloroethane	ug/L	5	UJ	50	R	5	UJ
2-Hexanone	ug/L	10	UJ	100	R	10	UJ
Tetrachloroethylene (PCE)	ug/L	3.3	J	50	R	3.9	J

Analytical Data Summary

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	StationID	A039GP121		A039GP122		A039GP122	
	SampleID	039GP121D3DL		039GP122-I		039GP122D1	
	DateCollected	10/09/2003		10/10/2003		10/10/2003	
	DateExtracted	10/17/2003		10/17/2003		10/16/2003	
	DateAnalyzed	10/17/2003		10/17/2003		10/16/2003	
	SDGNumber	89993		89993		89993	
Parameter	Units						
Chloromethane	ug/L	100	R	10	UJ	10	UJ
Vinyl chloride	ug/L	27.2	R	10	U	10	UJ
Bromomethane	ug/L	100	R	10	UJ	10	UJ
Chloroethane	ug/L	100	R	10	U	10	UJ
1,1-Dichloroethene	ug/L	11.1	R	5	U	5	UJ
Acetone	ug/L	100	R	10	U	2.8	J
Carbon Disulfide	ug/L	50	R	5	U	5	UJ
Methylene Chloride	ug/L	50	R	5	UJ	5	UJ
trans-1,2-Dichloroethene	ug/L	7	R	5	U	5	UJ
1,1-Dichloroethane	ug/L	7	R	5	U	5	UJ
Vinyl acetate	ug/L	100	R	10	UJ	10	UJ
Methyl ethyl ketone (2-Butanone)	ug/L	100	R	10	U	10	UJ
cis-1,2-Dichloroethylene	ug/L	624	=	5	U	2.2	J
1,2-Dichloroethene (total)	ug/L	631	=	5	U	2.2	J
Chloroform	ug/L	50	R	5	U	5	UJ
1,1,1-Trichloroethane	ug/L	50	R	5	U	5	UJ
Carbon Tetrachloride	ug/L	50	R	5	U	5	UJ
1,2-Dichloroethane	ug/L	50	R	5	U	5	UJ
Benzene	ug/L	50	R	5	U	5	UJ
Trichloroethylene (TCE)	ug/L	148	=	5	U	0.57	J
1,2-Dichloropropane	ug/L	50	R	5	U	5	UJ
Bromodichloromethane	ug/L	50	R	5	U	5	UJ
2-Chloroethyl vinyl ether	ug/L	100	R	10	U	10	UJ
cis-1,3-Dichloropropene	ug/L	50	R	5	U	5	UJ
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	100	R	10	U	10	UJ
Toluene	ug/L	50	R	5	U	5	UJ
trans-1,3-Dichloropropene	ug/L	50	R	5	U	5	UJ
1,1,2-Trichloroethane	ug/L	50	R	5	U	5	UJ
2-Hexanone	ug/L	100	R	10	U	10	UJ
Tetrachloroethylene (PCE)	ug/L	50	R	5	U	5	UJ

Analytical Data Summary

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StationID	A039GP122		A039GP122		A039GP123		
SampleID	039GP122D2		039GP122D3		039GP123-D1		
DateCollected	10/10/2003		10/14/2003		10/14/2003		
DateExtracted	10/16/2003		10/16/2003		10/16/2003		
DateAnalyzed	10/16/2003		10/16/2003		10/16/2003		
SDGNumber	89993		89993		89993		
Parameter	Units						
Chloromethane	ug/L	10	U	10	U	10	UJ
Vinyl chloride	ug/L	5.6	J	5.6	J	10	UJ
Bromomethane	ug/L	10	UJ	10	UJ	10	UJ
Chloroethane	ug/L	10	U	10	U	10	UJ
1,1-Dichloroethene	ug/L	1.1	J	1.2	J	5	UJ
Acetone	ug/L	10	U	10	U	3	J
Carbon Disulfide	ug/L	5	U	5	U	5	UJ
Methylene Chloride	ug/L	5	U	5	U	5	UJ
trans-1,2-Dichloroethene	ug/L	1.2	J	1.1	J	5	UJ
1,1-Dichloroethane	ug/L	1.9	J	1.8	J	5	UJ
Vinyl acetate	ug/L	10	U	10	U	10	UJ
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	10	UJ
cis-1,2-Dichloroethylene	ug/L	89.7	=	83.6	=	3.2	J
1,2-Dichloroethene (total)	ug/L	90.8	=	84.8	=	3.2	J
Chloroform	ug/L	5	U	5	U	5	UJ
1,1,1-Trichloroethane	ug/L	5	U	5	U	5	UJ
Carbon Tetrachloride	ug/L	5	U	5	U	5	UJ
1,2-Dichloroethane	ug/L	5	U	5	U	5	UJ
Benzene	ug/L	5	U	5	U	5	UJ
Trichloroethylene (TCE)	ug/L	15.2	=	15.3	=	0.46	J
1,2-Dichloropropane	ug/L	5	U	5	U	5	UJ
Bromodichloromethane	ug/L	5	U	5	U	5	UJ
2-Chloroethyl vinyl ether	ug/L	10	U	10	U	10	UJ
cis-1,3-Dichloropropene	ug/L	5	U	5	U	5	UJ
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	10	UJ
Toluene	ug/L	5	U	5	U	5	UJ
trans-1,3-Dichloropropene	ug/L	5	U	5	U	5	UJ
1,1,2-Trichloroethane	ug/L	5	U	5	U	5	UJ
2-Hexanone	ug/L	10	U	10	U	10	UJ
Tetrachloroethylene (PCE)	ug/L	4.9	J	4.8	J	5	UJ

Analytical Data Summary

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StationID	A039GP123		A039GP123		A039GP123		
SampleID	039GP123-I		039GP123D2		039GP123D3		
DateCollected	10/14/2003		10/14/2003		10/14/2003		
DateExtracted	10/16/2003		10/16/2003		10/16/2003		
DateAnalyzed	10/16/2003		10/16/2003		10/16/2003		
SDGNumber	89993		89993		89993		
Parameter	Units						
Chloromethane	ug/L	10	UJ	10	U	10	UJ
Vinyl chloride	ug/L	10	UJ	1.6	J	1.6	J
Bromomethane	ug/L	10	UJ	10	UJ	10	UJ
Chloroethane	ug/L	10	UJ	10	U	10	UJ
1,1-Dichloroethene	ug/L	5	UJ	0.51	J	5	UJ
Acetone	ug/L	2.4	J	10	U	10	UJ
Carbon Disulfide	ug/L	5	UJ	5	U	5	UJ
Methylene Chloride	ug/L	5	UJ	5	U	5	UJ
trans-1,2-Dichloroethene	ug/L	5	UJ	0.38	J	5	UJ
1,1-Dichloroethane	ug/L	5	UJ	5	U	5	UJ
Vinyl acetate	ug/L	10	UJ	10	U	10	UJ
Methyl ethyl ketone (2-Butanone)	ug/L	10	UJ	10	U	10	UJ
cis-1,2-Dichloroethylene	ug/L	0.31	J	42.1	=	41.9	J
1,2-Dichloroethene (total)	ug/L	0.31	J	42.5	=	41.9	J
Chloroform	ug/L	5	UJ	5	U	5	UJ
1,1,1-Trichloroethane	ug/L	5	UJ	5	U	5	UJ
Carbon Tetrachloride	ug/L	5	UJ	5	U	5	UJ
1,2-Dichloroethane	ug/L	5	UJ	5	U	5	UJ
Benzene	ug/L	5	UJ	5	U	5	UJ
Trichloroethylene (TCE)	ug/L	5	UJ	6.3	=	6.5	J
1,2-Dichloropropane	ug/L	5	UJ	5	U	5	UJ
Bromodichloromethane	ug/L	5	UJ	5	U	5	UJ
2-Chloroethyl vinyl ether	ug/L	10	UJ	10	U	10	UJ
cis-1,3-Dichloropropene	ug/L	5	UJ	5	U	5	UJ
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	UJ	10	U	10	UJ
Toluene	ug/L	5	UJ	5	U	5	UJ
trans-1,3-Dichloropropene	ug/L	5	UJ	5	U	5	UJ
1,1,2-Trichloroethane	ug/L	5	UJ	5	U	5	UJ
2-Hexanone	ug/L	10	UJ	10	U	10	UJ
Tetrachloroethylene (PCE)	ug/L	5	UJ	5	U	5	UJ

Analytical Data Summary

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StationID	A039GP124		A039GP124		A039GP124		
SampleID	039GP124-I		039GP124D1		039GP124D2		
DateCollected	10/14/2003		10/14/2003		10/14/2003		
DateExtracted	10/16/2003		10/16/2003		10/16/2003		
DateAnalyzed	10/16/2003		10/16/2003		10/16/2003		
SDGNumber	89993		89993		89993		
Parameter	Units						
Chloromethane	ug/L	10	UJ	10	U	10	UJ
Vinyl chloride	ug/L	10	UJ	10	U	36.1	J
Bromomethane	ug/L	10	UJ	10	UJ	10	UJ
Chloroethane	ug/L	10	UJ	10	U	10	UJ
1,1-Dichloroethene	ug/L	5	UJ	5	U	16	J
Acetone	ug/L	2.4	J	10	U	3.5	J
Carbon Disulfide	ug/L	5	UJ	5	U	5	UJ
Methylene Chloride	ug/L	5	UJ	5	U	5	UJ
trans-1,2-Dichloroethene	ug/L	5	UJ	5	U	9.6	J
1,1-Dichloroethane	ug/L	5	UJ	5	U	9.4	J
Vinyl acetate	ug/L	10	UJ	10	UJ	10	UJ
Methyl ethyl ketone (2-Butanone)	ug/L	10	UJ	10	U	10	UJ
cis-1,2-Dichloroethylene	ug/L	0.61	J	11.5	=	729	R
1,2-Dichloroethene (total)	ug/L	0.61	J	11.5	=	738	R
Chloroform	ug/L	5	UJ	5	U	5	UJ
1,1,1-Trichloroethane	ug/L	5	UJ	5	U	5	UJ
Carbon Tetrachloride	ug/L	5	UJ	5	U	5	UJ
1,2-Dichloroethane	ug/L	5	UJ	5	U	5	UJ
Benzene	ug/L	5	UJ	5	U	1.2	J
Trichloroethylene (TCE)	ug/L	5	UJ	4.5	J	247	R
1,2-Dichloropropane	ug/L	5	UJ	5	U	5	UJ
Bromodichloromethane	ug/L	5	UJ	5	U	5	UJ
2-Chloroethyl vinyl ether	ug/L	10	UJ	10	R	10	UJ
cis-1,3-Dichloropropene	ug/L	5	UJ	5	U	5	UJ
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	UJ	10	U	10	UJ
Toluene	ug/L	5	UJ	5	U	5	UJ
trans-1,3-Dichloropropene	ug/L	5	UJ	5	U	5	UJ
1,1,2-Trichloroethane	ug/L	5	UJ	5	U	5	UJ
2-Hexanone	ug/L	10	UJ	10	U	10	UJ
Tetrachloroethylene (PCE)	ug/L	5	UJ	5	U	0.36	J

Analytical Data Summary

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StationID	A039GP124		A039GP124		A039GP124		
SampleID	039GP124D2DL		039GP124D3		039GP124D3DL		
DateCollected	10/14/2003		10/14/2003		10/14/2003		
DateExtracted	10/17/2003		10/16/2003		10/17/2003		
DateAnalyzed	10/17/2003		10/16/2003		10/17/2003		
SDGNumber	89993		89993		89993		
Parameter	Units						
Chloromethane	ug/L	100	R	10	UJ	100	R
Vinyl chloride	ug/L	29.7	R	27.3	J	25.6	R
Bromomethane	ug/L	100	R	10	UJ	100	R
Chloroethane	ug/L	100	R	10	UJ	100	R
1,1-Dichloroethene	ug/L	14.4	R	12.6	J	10.7	R
Acetone	ug/L	100	R	2.8	J	100	R
Carbon Disulfide	ug/L	50	R	5	UJ	50	R
Methylene Chloride	ug/L	50	R	5	UJ	50	R
trans-1,2-Dichloroethene	ug/L	6.3	R	7.4	J	6.4	R
1,1-Dichloroethane	ug/L	9.5	R	7.6	J	7	R
Vinyl acetate	ug/L	100	R	10	UJ	100	R
Methyl ethyl ketone (2-Butanone)	ug/L	100	R	10	UJ	100	R
cis-1,2-Dichloroethylene	ug/L	767	=	589	R	627	=
1,2-Dichloroethene (total)	ug/L	773	=	596	R	634	=
Chloroform	ug/L	50	R	5	UJ	50	R
1,1,1-Trichloroethane	ug/L	50	R	5	UJ	50	R
Carbon Tetrachloride	ug/L	50	R	5	UJ	50	R
1,2-Dichloroethane	ug/L	50	R	5	UJ	50	R
Benzene	ug/L	50	R	1.1	J	50	R
Trichloroethylene (TCE)	ug/L	248	=	173	R	174	=
1,2-Dichloropropane	ug/L	50	R	5	UJ	50	R
Bromodichloromethane	ug/L	50	R	5	UJ	50	R
2-Chloroethyl vinyl ether	ug/L	100	R	10	UJ	100	R
cis-1,3-Dichloropropene	ug/L	50	R	5	UJ	50	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	100	R	10	UJ	100	R
Toluene	ug/L	50	R	5	UJ	50	R
trans-1,3-Dichloropropene	ug/L	50	R	5	UJ	50	R
1,1,2-Trichloroethane	ug/L	50	R	5	UJ	50	R
2-Hexanone	ug/L	100	R	10	UJ	100	R
Tetrachloroethylene (PCE)	ug/L	50	R	5	UJ	50	R

Analytical Data Summary

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StationID	A039GP125		A039GP125		A039GP125		
SampleID	039GP125-I		039GP125D1		039GP125D2		
DateCollected	10/15/2003		10/15/2003		10/15/2003		
DateExtracted	10/21/2003		10/20/2003		10/20/2003		
DateAnalyzed	10/21/2003		10/20/2003		10/20/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Chloromethane	ug/L	10	UJ	10	UJ	10	UJ
Vinyl chloride	ug/L	10	U	10	U	14.9	J
Bromomethane	ug/L	10	U	10	UJ	10	UJ
Chloroethane	ug/L	10	U	10	U	10	UJ
1,1-Dichloroethene	ug/L	5	U	5	U	6.4	J
Acetone	ug/L	10	U	10	U	5.3	J
Carbon Disulfide	ug/L	5	U	5	U	5	UJ
Methylene Chloride	ug/L	5	U	5	UJ	5	UJ
trans-1,2-Dichloroethene	ug/L	5	U	5	U	3.7	J
1,1-Dichloroethane	ug/L	5	U	5	U	5.3	J
Vinyl acetate	ug/L	10	U	10	UJ	10	UJ
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	10	UJ
cis-1,2-Dichloroethylene	ug/L	15.8	=	12.1	=	393	R
1,2-Dichloroethene (total)	ug/L	15.8	=	12.1	=	397	R
Chloroform	ug/L	5	U	5	U	5	UJ
1,1,1-Trichloroethane	ug/L	5	U	5	U	5	UJ
Carbon Tetrachloride	ug/L	5	U	5	U	5	UJ
1,2-Dichloroethane	ug/L	5	U	5	U	5	UJ
Benzene	ug/L	5	U	5	U	0.58	J
Trichloroethylene (TCE)	ug/L	5.5	=	3.2	J	100	R
1,2-Dichloropropane	ug/L	5	U	5	U	5	UJ
Bromodichloromethane	ug/L	5	U	5	U	5	UJ
2-Chloroethyl vinyl ether	ug/L	10	R	10	U	10	UJ
cis-1,3-Dichloropropene	ug/L	5	U	5	U	5	UJ
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	10	UJ
Toluene	ug/L	5	U	5	U	5	UJ
trans-1,3-Dichloropropene	ug/L	5	U	5	U	5	UJ
1,1,2-Trichloroethane	ug/L	5	U	5	U	5	UJ
2-Hexanone	ug/L	10	U	10	U	10	UJ
Tetrachloroethylene (PCE)	ug/L	5	U	5	U	0.7	J

Analytical Data Summary

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StationID	A039GP125		A039GP125		A039GP125		
SampleID	039GP125D2DL		039GP125D3		039GP125D3DL		
DateCollected	10/15/2003		10/15/2003		10/15/2003		
DateExtracted	10/21/2003		10/20/2003		10/21/2003		
DateAnalyzed	10/21/2003		10/20/2003		10/21/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Chloromethane	ug/L	50	R	10	UJ	100	R
Vinyl chloride	ug/L	15.6	R	38.1	J	52	R
Bromomethane	ug/L	50	R	10	UJ	100	R
Chloroethane	ug/L	50	R	10	UJ	100	R
1,1-Dichloroethene	ug/L	4.4	R	17.2	J	14.4	R
Acetone	ug/L	50	R	4	J	100	R
Carbon Disulfide	ug/L	25	R	5	UJ	50	R
Methylene Chloride	ug/L	25	R	5	UJ	50	R
trans-1,2-Dichloroethene	ug/L	2.8	R	8.5	J	8	R
1,1-Dichloroethane	ug/L	25	R	12.6	J	12.3	R
Vinyl acetate	ug/L	50	R	10	UJ	100	R
Methyl ethyl ketone (2-Butanone)	ug/L	50	R	10	UJ	100	R
cis-1,2-Dichloroethylene	ug/L	371	J	759	R	901	=
1,2-Dichloroethene (total)	ug/L	374	J	768	R	909	=
Chloroform	ug/L	25	R	5	UJ	50	R
1,1,1-Trichloroethane	ug/L	25	R	5	UJ	50	R
Carbon Tetrachloride	ug/L	25	R	5	UJ	50	R
1,2-Dichloroethane	ug/L	25	R	5	UJ	50	R
Benzene	ug/L	25	R	0.95	J	50	R
Trichloroethylene (TCE)	ug/L	69.2	J	338	R	331	=
1,2-Dichloropropane	ug/L	25	R	5	UJ	50	R
Bromodichloromethane	ug/L	25	R	5	UJ	50	R
2-Chloroethyl vinyl ether	ug/L	50	R	10	UJ	100	R
cis-1,3-Dichloropropene	ug/L	25	R	5	UJ	50	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	50	R	10	UJ	100	R
Toluene	ug/L	25	R	5	UJ	50	R
trans-1,3-Dichloropropene	ug/L	25	R	5	UJ	50	R
1,1,2-Trichloroethane	ug/L	25	R	5	UJ	50	R
2-Hexanone	ug/L	50	R	10	UJ	100	R
Tetrachloroethylene (PCE)	ug/L	25	R	2.7	J	50	R

Analytical Data Summary

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StationID	A039GP126		A039GP126		A039GP126		
SampleID	039GP126-I		039GP126D1		039GP126D2		
DateCollected	10/15/2003		10/15/2003		10/15/2003		
DateExtracted	10/21/2003		10/20/2003		10/20/2003		
DateAnalyzed	10/21/2003		10/20/2003		10/20/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Chloromethane	ug/L	10	UJ	10	UJ	10	UJ
Vinyl chloride	ug/L	10	U	10	U	19.5	J
Bromomethane	ug/L	10	U	10	UJ	10	UJ
Chloroethane	ug/L	10	U	10	U	10	UJ
1,1-Dichloroethene	ug/L	5	U	5	U	7.5	J
Acetone	ug/L	10	U	3.8	J	2.6	J
Carbon Disulfide	ug/L	5	U	5	U	5	UJ
Methylene Chloride	ug/L	5	U	5	UJ	5	UJ
trans-1,2-Dichloroethene	ug/L	5	U	5	U	6.5	J
1,1-Dichloroethane	ug/L	5	U	0.66	J	6	J
Vinyl acetate	ug/L	10	U	10	UJ	10	UJ
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	10	UJ
cis-1,2-Dichloroethylene	ug/L	10.3	=	17.3	=	440	R
1,2-Dichloroethene (total)	ug/L	10.3	=	17.3	=	446	R
Chloroform	ug/L	5	U	5	U	5	UJ
1,1,1-Trichloroethane	ug/L	5	U	5	U	5	UJ
Carbon Tetrachloride	ug/L	5	U	5	U	5	UJ
1,2-Dichloroethane	ug/L	5	U	5	U	5	UJ
Benzene	ug/L	5	U	5	U	0.64	J
Trichloroethylene (TCE)	ug/L	1.2	J	4.7	J	77.5	J
1,2-Dichloropropane	ug/L	5	U	5	U	5	UJ
Bromodichloromethane	ug/L	5	U	5	U	5	UJ
2-Chloroethyl vinyl ether	ug/L	10	UJ	10	U	10	UJ
cis-1,3-Dichloropropene	ug/L	5	U	5	U	5	UJ
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	10	UJ
Toluene	ug/L	5	U	5	U	5	UJ
trans-1,3-Dichloropropene	ug/L	5	U	5	U	5	UJ
1,1,2-Trichloroethane	ug/L	5	U	5	U	5	UJ
2-Hexanone	ug/L	10	U	10	U	10	UJ
Tetrachloroethylene (PCE)	ug/L	5	U	0.55	J	27.9	J

Analytical Data Summary

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StationID	A039GP126	A039GP126	A039GP126
SampleID	039GP126D2DL	039GP126D3	039GP126D3DL
DateCollected	10/15/2003	10/15/2003	10/15/2003
DateExtracted	10/21/2003	10/20/2003	10/21/2003
DateAnalyzed	10/21/2003	10/20/2003	10/21/2003
SDGNumber	100207	100207	100207

Parameter	Units	A039GP126		A039GP126		A039GP126	
Chloromethane	ug/L	50	R	10	UJ	50	R
Vinyl chloride	ug/L	23.1	R	21	J	22.7	R
Bromomethane	ug/L	50	R	10	UJ	50	R
Chloroethane	ug/L	50	R	10	UJ	50	R
1,1-Dichloroethene	ug/L	6.3	R	7	J	4.4	R
Acetone	ug/L	50	R	5.6	J	50	R
Carbon Disulfide	ug/L	25	R	5	UJ	25	R
Methylene Chloride	ug/L	25	R	5	UJ	25	R
trans-1,2-Dichloroethene	ug/L	4.9	R	3.8	J	2.7	R
1,1-Dichloroethane	ug/L	5	R	6.5	J	4.8	R
Vinyl acetate	ug/L	50	R	10	UJ	50	R
Methyl ethyl ketone (2-Butanone)	ug/L	50	R	10	UJ	50	R
cis-1,2-Dichloroethylene	ug/L	441	=	387	R	337	=
1,2-Dichloroethene (total)	ug/L	446	=	391	R	340	=
Chloroform	ug/L	25	R	5	UJ	25	R
1,1,1-Trichloroethane	ug/L	25	R	5	UJ	25	R
Carbon Tetrachloride	ug/L	25	R	5	UJ	25	R
1,2-Dichloroethane	ug/L	25	R	5	UJ	25	R
Benzene	ug/L	25	R	0.77	J	25	R
Trichloroethylene (TCE)	ug/L	64.4	R	71	J	51	R
1,2-Dichloropropane	ug/L	25	R	5	UJ	25	R
Bromodichloromethane	ug/L	25	R	5	UJ	25	R
2-Chloroethyl vinyl ether	ug/L	50	R	10	UJ	50	R
cis-1,3-Dichloropropene	ug/L	25	R	5	UJ	25	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	50	R	10	UJ	50	R
Toluene	ug/L	25	R	5	UJ	25	R
trans-1,3-Dichloropropene	ug/L	25	R	5	UJ	25	R
1,1,2-Trichloroethane	ug/L	25	R	5	UJ	25	R
2-Hexanone	ug/L	50	R	10	UJ	50	R
Tetrachloroethylene (PCE)	ug/L	26.3	R	22.3	J	16.4	R

Analytical Data Summary

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StationID	A039GP127		A039GP127		A039GP127		
SampleID	039GP127-I		039GP127D1		039GP127D2		
DateCollected	10/15/2003		10/15/2003		10/16/2003		
DateExtracted	10/21/2003		10/21/2003		10/21/2003		
DateAnalyzed	10/21/2003		10/21/2003		10/21/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Chloromethane	ug/L	10	UJ	10	UJ	10	UJ
Vinyl chloride	ug/L	2.8	J	10	U	29.1	J
Bromomethane	ug/L	10	U	10	U	10	U
Chloroethane	ug/L	10	U	10	U	10	U
1,1-Dichloroethene	ug/L	2.3	J	0.94	J	9.3	J
Acetone	ug/L	10	U	4.8	J	3.5	J
Carbon Disulfide	ug/L	5	U	5	U	5	U
Methylene Chloride	ug/L	5	U	5	U	5	U
trans-1,2-Dichloroethene	ug/L	0.46	J	5	U	4.1	J
1,1-Dichloroethane	ug/L	5	U	5	U	7.4	J
Vinyl acetate	ug/L	10	U	10	U	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	10	U
cis-1,2-Dichloroethylene	ug/L	52.6	=	19	=	534	R
1,2-Dichloroethene (total)	ug/L	53	=	19	=	538	R
Chloroform	ug/L	5	U	5	U	5	U
1,1,1-Trichloroethane	ug/L	5	U	5	U	5	U
Carbon Tetrachloride	ug/L	5	U	5	U	5	U
1,2-Dichloroethane	ug/L	5	U	5	U	5	U
Benzene	ug/L	5	U	5	U	2.3	J
Trichloroethylene (TCE)	ug/L	35.9	=	34.6	=	240	R
1,2-Dichloropropane	ug/L	5	U	5	U	5	U
Bromodichloromethane	ug/L	5	U	5	U	5	U
2-Chloroethyl vinyl ether	ug/L	10	UJ	10	UJ	10	UJ
cis-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	10	U
Toluene	ug/L	5	U	5	U	5	U
trans-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
1,1,2-Trichloroethane	ug/L	5	U	5	U	5	U
2-Hexanone	ug/L	10	U	10	U	10	U
Tetrachloroethylene (PCE)	ug/L	5	U	1	J	15.7	J

Analytical Data Summary

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StationID	A039GP127		A039GP127		A039GP127		
SampleID	039GP127D2DL		039GP127D3		039GP127D3DL		
DateCollected	10/16/2003		10/16/2003		10/16/2003		
DateExtracted	10/22/2003		10/21/2003		10/22/2003		
DateAnalyzed	10/22/2003		10/21/2003		10/22/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Chloromethane	ug/L	100	R	10	UJ	100	R
Vinyl chloride	ug/L	29.3	R	28.5	=	28.4	R
Bromomethane	ug/L	100	R	10	U	100	R
Chloroethane	ug/L	100	R	10	U	100	R
1,1-Dichloroethene	ug/L	8.3	R	10	=	9	R
Acetone	ug/L	24.3	R	6.6	J	100	R
Carbon Disulfide	ug/L	50	R	5	U	50	R
Methylene Chloride	ug/L	50	R	5	U	50	R
trans-1,2-Dichloroethene	ug/L	50	R	4	J	50	R
1,1-Dichloroethane	ug/L	50	R	7.6	=	50	R
Vinyl acetate	ug/L	100	R	10	U	100	R
Methyl ethyl ketone (2-Butanone)	ug/L	100	R	10	U	100	R
cis-1,2-Dichloroethylene	ug/L	454	=	564	R	473	=
1,2-Dichloroethene (total)	ug/L	454	=	568	R	473	=
Chloroform	ug/L	50	R	5	U	50	R
1,1,1-Trichloroethane	ug/L	50	R	5	U	50	R
Carbon Tetrachloride	ug/L	50	R	5	U	50	R
1,2-Dichloroethane	ug/L	50	R	5	U	50	R
Benzene	ug/L	50	R	2.4	J	50	R
Trichloroethylene (TCE)	ug/L	208	=	254	R	215	=
1,2-Dichloropropane	ug/L	50	R	5	U	50	R
Bromodichloromethane	ug/L	50	R	5	U	50	R
2-Chloroethyl vinyl ether	ug/L	100	R	10	UJ	100	R
cis-1,3-Dichloropropene	ug/L	50	R	5	U	50	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	100	R	10	U	100	R
Toluene	ug/L	50	R	5	U	50	R
trans-1,3-Dichloropropene	ug/L	50	R	5	U	50	R
1,1,2-Trichloroethane	ug/L	50	R	5	U	50	R
2-Hexanone	ug/L	100	R	10	U	100	R
Tetrachloroethylene (PCE)	ug/L	15.5	R	15	=	12.8	R

Analytical Data Summary

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StationID	A039GP128		A039GP128		A039GP128		
SampleID	039GP128-I		039GP128D1		039GP128D1DL		
DateCollected	10/16/2003		10/16/2003		10/16/2003		
DateExtracted	10/22/2003		10/21/2003		10/22/2003		
DateAnalyzed	10/22/2003		10/21/2003		10/22/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Chloromethane	ug/L	10	UJ	10	U	50	R
Vinyl chloride	ug/L	1.1	J	0.96	J	50	R
Bromomethane	ug/L	10	U	10	U	50	R
Chloroethane	ug/L	10	U	10	U	50	R
1,1-Dichloroethene	ug/L	1	J	3.2	J	2.9	R
Acetone	ug/L	2.8	J	2.4	J	50	R
Carbon Disulfide	ug/L	5	U	5	U	25	R
Methylene Chloride	ug/L	5	U	5	U	25	R
trans-1,2-Dichloroethene	ug/L	1.5	J	0.49	J	25	R
1,1-Dichloroethane	ug/L	5	U	5	U	25	R
Vinyl acetate	ug/L	10	U	10	U	50	R
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	50	R
cis-1,2-Dichloroethylene	ug/L	55.1	=	65.2	=	60	R
1,2-Dichloroethene (total)	ug/L	56.6	=	65.6	=	60	R
Chloroform	ug/L	5	U	5	U	25	R
1,1,1-Trichloroethane	ug/L	5	U	5	U	25	R
Carbon Tetrachloride	ug/L	5	U	5	U	25	R
1,2-Dichloroethane	ug/L	5	U	5	U	25	R
Benzene	ug/L	5	U	0.45	J	25	R
Trichloroethylene (TCE)	ug/L	8.9	=	223	R	203	=
1,2-Dichloropropane	ug/L	5	U	5	U	25	R
Bromodichloromethane	ug/L	5	U	5	U	25	R
2-Chloroethyl vinyl ether	ug/L	10	UJ	10	U	50	R
cis-1,3-Dichloropropene	ug/L	5	U	5	U	25	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	50	R
Toluene	ug/L	5	U	5	U	25	R
trans-1,3-Dichloropropene	ug/L	5	U	5	U	25	R
1,1,2-Trichloroethane	ug/L	5	U	5	U	25	R
2-Hexanone	ug/L	10	U	10	U	50	R
Tetrachloroethylene (PCE)	ug/L	5	U	1.3	J	25	R

Analytical Data Summary

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StationID	A039GP128		A039GP128		A039GP128		
SampleID	039GP128D2		039GP128D2DL		039GP128D3		
DateCollected	10/16/2003		10/16/2003		10/16/2003		
DateExtracted	10/20/2003		10/21/2003		10/20/2003		
DateAnalyzed	10/20/2003		10/21/2003		10/20/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Chloromethane	ug/L	10	UJ	100	R	10	UJ
Vinyl chloride	ug/L	19.2	J	25.4	R	15.8	J
Bromomethane	ug/L	10	UJ	100	R	10	UJ
Chloroethane	ug/L	10	UJ	100	R	10	UJ
1,1-Dichloroethene	ug/L	15.5	J	12.6	R	10.9	J
Acetone	ug/L	6	J	100	R	7.8	J
Carbon Disulfide	ug/L	5	UJ	50	R	5	UJ
Methylene Chloride	ug/L	5	UJ	50	R	5	UJ
trans-1,2-Dichloroethene	ug/L	5.2	J	3.9	R	2.3	J
1,1-Dichloroethane	ug/L	12	J	10.5	R	8.3	J
Vinyl acetate	ug/L	10	UJ	100	R	10	UJ
Methyl ethyl ketone (2-Butanone)	ug/L	10	UJ	100	R	10	UJ
cis-1,2-Dichloroethylene	ug/L	784	R	887	J	547	R
1,2-Dichloroethene (total)	ug/L	789	R	891	J	549	R
Chloroform	ug/L	5	UJ	50	R	5	UJ
1,1,1-Trichloroethane	ug/L	5	UJ	50	R	5	UJ
Carbon Tetrachloride	ug/L	5	UJ	50	R	5	UJ
1,2-Dichloroethane	ug/L	5	UJ	50	R	5	UJ
Benzene	ug/L	3	J	50	R	2	J
Trichloroethylene (TCE)	ug/L	658	R	655	J	397	R
1,2-Dichloropropane	ug/L	5	UJ	50	R	5	UJ
Bromodichloromethane	ug/L	5	UJ	50	R	5	UJ
2-Chloroethyl vinyl ether	ug/L	10	UJ	100	R	10	UJ
cis-1,3-Dichloropropene	ug/L	5	UJ	50	R	5	UJ
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	UJ	100	R	10	UJ
Toluene	ug/L	5	UJ	50	R	5	UJ
trans-1,3-Dichloropropene	ug/L	5	UJ	50	R	5	UJ
1,1,2-Trichloroethane	ug/L	5	UJ	50	R	5	UJ
2-Hexanone	ug/L	10	UJ	100	R	10	UJ
Tetrachloroethylene (PCE)	ug/L	6.1	J	3.8	R	8.7	J

Analytical Data Summary

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StationID	A039GP128		A039GP129		A039GP129		
SampleID	039GP128D3DL		039GP12928		039GP12938		
DateCollected	10/16/2003		11/04/2003		11/04/2003		
DateExtracted	10/21/2003		11/17/2003		11/18/2003		
DateAnalyzed	10/21/2003		11/17/2003		11/18/2003		
SDGNumber	100207		101335		101335		
Parameter	Units						
Chloromethane	ug/L	100	R	10	U	10	U
Vinyl chloride	ug/L	20.7	R	10	U	10	U
Bromomethane	ug/L	100	R	10	U	10	U
Chloroethane	ug/L	100	R	10	U	10	U
1,1-Dichloroethene	ug/L	9.3	R	5	U	5	U
Acetone	ug/L	100	R	10	U	10	U
Carbon Disulfide	ug/L	50	R	5	U	5	U
Methylene Chloride	ug/L	50	R	5	UJ	5	U
trans-1,2-Dichloroethene	ug/L	50	R	0.68	J	0.41	J
1,1-Dichloroethane	ug/L	50	R	1.1	J	1.2	J
Vinyl acetate	ug/L	100	R	10	U	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	100	R	10	U	10	U
cis-1,2-Dichloroethylene	ug/L	616	J	36.8	=	43.8	=
1,2-Dichloroethene (total)	ug/L	616	J	37.5	=	44.2	=
Chloroform	ug/L	50	R	5	U	5	U
1,1,1-Trichloroethane	ug/L	50	R	5	U	5	U
Carbon Tetrachloride	ug/L	50	R	5	U	5	U
1,2-Dichloroethane	ug/L	50	R	5	U	5	U
Benzene	ug/L	50	R	5	U	5	U
Trichloroethylene (TCE)	ug/L	388	J	10.7	=	14.3	=
1,2-Dichloropropane	ug/L	50	R	5	U	5	U
Bromodichloromethane	ug/L	50	R	5	U	5	U
2-Chloroethyl vinyl ether	ug/L	100	R	10	U	10	UJ
cis-1,3-Dichloropropene	ug/L	50	R	5	U	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	100	R	10	U	10	U
Toluene	ug/L	50	R	5	U	5	U
trans-1,3-Dichloropropene	ug/L	50	R	5	U	5	U
1,1,2-Trichloroethane	ug/L	50	R	5	U	5	U
2-Hexanone	ug/L	100	R	10	U	10	U
Tetrachloroethylene (PCE)	ug/L	7.3	R	5	U	5	U

Analytical Data Summary

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StationID	A039GP129		A039GP129		A039GP129		
SampleID	039GP12942		039GP12942DL		039GP12946		
DateCollected	11/04/2003		11/04/2003		11/04/2003		
DateExtracted	11/18/2003		11/18/2003		11/17/2003		
DateAnalyzed	11/18/2003		11/18/2003		11/17/2003		
SDGNumber	101335		101335		101335		
Parameter	Units						
Chloromethane	ug/L	10	U	50	R	10	U
Vinyl chloride	ug/L	24.4	=	20.4	R	23.2	=
Bromomethane	ug/L	10	U	50	R	10	U
Chloroethane	ug/L	10	U	50	R	10	U
1,1-Dichloroethene	ug/L	5.8	U	4.8	R	6.1	U
Acetone	ug/L	10	U	50	R	10	U
Carbon Disulfide	ug/L	5	U	25	R	5	U
Methylene Chloride	ug/L	5	U	25	R	5	UJ
trans-1,2-Dichloroethene	ug/L	4.3	J	3.6	R	5.1	=
1,1-Dichloroethane	ug/L	4.5	J	4	R	4.7	J
Vinyl acetate	ug/L	10	U	50	R	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	50	R	10	U
cis-1,2-Dichloroethylene	ug/L	367	R	328	=	386	R
1,2-Dichloroethene (total)	ug/L	371	R	332	=	391	R
Chloroform	ug/L	5	U	25	R	5	U
1,1,1-Trichloroethane	ug/L	5	U	25	R	5	U
Carbon Tetrachloride	ug/L	5	U	25	R	5	U
1,2-Dichloroethane	ug/L	5	U	25	R	5	U
Benzene	ug/L	0.74	J	25	R	0.73	J
Trichloroethylene (TCE)	ug/L	44.1	=	39.7	R	49.1	=
1,2-Dichloropropane	ug/L	5	U	25	R	5	U
Bromodichloromethane	ug/L	5	U	25	R	5	U
2-Chloroethyl vinyl ether	ug/L	10	UJ	50	R	10	U
cis-1,3-Dichloropropene	ug/L	5	U	25	R	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	50	R	10	U
Toluene	ug/L	5	U	25	R	5	U
trans-1,3-Dichloropropene	ug/L	5	U	25	R	5	U
1,1,2-Trichloroethane	ug/L	5	U	25	R	5	U
2-Hexanone	ug/L	10	U	50	R	10	U
Tetrachloroethylene (PCE)	ug/L	5	U	25	R	0.36	J

Analytical Data Summary

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	StationID	A039GP129		A039GP130		A039GP130	
	SampleID	039GP12946DL		039GP13028		039GP13038	
	DateCollected	11/04/2003		11/04/2003		11/04/2003	
	DateExtracted	11/18/2003		11/18/2003		11/17/2003	
	DateAnalyzed	11/18/2003		11/18/2003		11/17/2003	
	SDGNumber	101335		101335		101335	
Parameter	Units						
Chloromethane	ug/L	50	R	10	U	10	U
Vinyl chloride	ug/L	23.4	R	10	U	10	U
Bromomethane	ug/L	50	R	10	U	10	U
Chloroethane	ug/L	50	R	10	U	10	U
1,1-Dichloroethene	ug/L	4.1	R	5	U	5	U
Acetone	ug/L	50	R	10	U	10	U
Carbon Disulfide	ug/L	25	R	5	U	5	U
Methylene Chloride	ug/L	25	R	5	U	5	UJ
trans-1,2-Dichloroethene	ug/L	4.7	R	5	U	0.72	J
1,1-Dichloroethane	ug/L	3.7	R	5	U	1.1	J
Vinyl acetate	ug/L	50	R	10	U	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	50	R	10	U	10	U
cis-1,2-Dichloroethylene	ug/L	346	=	5	U	56.8	=
1,2-Dichloroethene (total)	ug/L	351	=	5	U	57.5	=
Chloroform	ug/L	25	R	5	U	5	U
1,1,1-Trichloroethane	ug/L	25	R	5	U	5	U
Carbon Tetrachloride	ug/L	25	R	5	U	5	U
1,2-Dichloroethane	ug/L	25	R	5	U	5	U
Benzene	ug/L	25	R	5	U	0.37	J
Trichloroethylene (TCE)	ug/L	44.5	R	5	U	28.1	=
1,2-Dichloropropane	ug/L	25	R	5	U	5	U
Bromodichloromethane	ug/L	25	R	5	U	5	U
2-Chloroethyl vinyl ether	ug/L	50	R	10	UJ	10	U
cis-1,3-Dichloropropene	ug/L	25	R	5	U	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	50	R	10	U	10	U
Toluene	ug/L	25	R	5	U	5	U
trans-1,3-Dichloropropene	ug/L	25	R	5	U	5	U
1,1,2-Trichloroethane	ug/L	25	R	5	U	5	U
2-Hexanone	ug/L	50	R	10	U	10	U
Tetrachloroethylene (PCE)	ug/L	25	R	5	U	5	U

Analytical Data Summary

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	StationID	A039GP130		A039GP130		A039GP131	
	SampleID	039GP13042		039GP13046		039GP13128	
	DateCollected	11/04/2003		11/04/2003		11/04/2003	
	DateExtracted	11/17/2003		11/17/2003		11/17/2003	
	DateAnalyzed	11/17/2003		11/17/2003		11/17/2003	
	SDGNumber	101335		101335		101335	
Parameter	Units						
Chloromethane	ug/L	10	U	10	U	10	U
Vinyl chloride	ug/L	4.4	J	5.7	J	10	U
Bromomethane	ug/L	10	U	10	U	10	U
Chloroethane	ug/L	10	U	10	U	10	U
1,1-Dichloroethene	ug/L	5	U	5	U	5	U
Acetone	ug/L	10	U	10	U	10	U
Carbon Disulfide	ug/L	5	U	5	U	5	U
Methylene Chloride	ug/L	5	UJ	5	UJ	5	UJ
trans-1,2-Dichloroethene	ug/L	0.56	J	0.92	J	5	U
1,1-Dichloroethane	ug/L	1.1	J	1.5	J	5	U
Vinyl acetate	ug/L	10	U	10	U	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	10	U
cis-1,2-Dichloroethylene	ug/L	74.8	=	95.6	=	4.1	J
1,2-Dichloroethene (total)	ug/L	75.3	=	96.5	=	4.1	J
Chloroform	ug/L	5	U	5	U	5	U
1,1,1-Trichloroethane	ug/L	5	U	5	U	5	U
Carbon Tetrachloride	ug/L	5	U	5	U	5	U
1,2-Dichloroethane	ug/L	5	U	5	U	5	U
Benzene	ug/L	5	U	5	U	5	U
Trichloroethylene (TCE)	ug/L	19.8	=	26.1	=	2.6	J
1,2-Dichloropropane	ug/L	5	U	5	U	5	U
Bromodichloromethane	ug/L	5	U	5	U	5	U
2-Chloroethyl vinyl ether	ug/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	10	U
Toluene	ug/L	5	U	5	U	5	U
trans-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
1,1,2-Trichloroethane	ug/L	5	U	5	U	5	U
2-Hexanone	ug/L	10	U	10	U	10	U
Tetrachloroethylene (PCE)	ug/L	5	U	0.48	J	5	U

Analytical Data Summary

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StationID	A039GP131		A039GP131		A039GP131		
SampleID	039GP13138		039GP13142		039GP13146		
DateCollected	11/04/2003		11/04/2003		11/04/2003		
DateExtracted	11/17/2003		11/17/2003		11/17/2003		
DateAnalyzed	11/17/2003		11/17/2003		11/17/2003		
SDGNumber	101335		101335		101335		
Parameter	Units						
Chloromethane	ug/L	10	U	10	U	10	U
Vinyl chloride	ug/L	10	U	10	U	10	U
Bromomethane	ug/L	10	U	10	U	10	U
Chloroethane	ug/L	10	U	10	U	10	U
1,1-Dichloroethene	ug/L	5	U	5	U	5	U
Acetone	ug/L	10	U	10	U	10	U
Carbon Disulfide	ug/L	5	U	5	U	5	U
Methylene Chloride	ug/L	5	UJ	5	UJ	5	UJ
trans-1,2-Dichloroethene	ug/L	5	U	5	U	5	U
1,1-Dichloroethane	ug/L	0.69	J	5	U	5	U
Vinyl acetate	ug/L	10	U	10	U	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	10	U
cis-1,2-Dichloroethylene	ug/L	36	=	10.5	=	11.2	=
1,2-Dichloroethene (total)	ug/L	36	=	10.5	=	11.2	=
Chloroform	ug/L	5	U	5	U	5	U
1,1,1-Trichloroethane	ug/L	5	U	5	U	5	U
Carbon Tetrachloride	ug/L	5	U	5	U	5	U
1,2-Dichloroethane	ug/L	5	U	5	U	5	U
Benzene	ug/L	5	U	5	U	5	U
Trichloroethylene (TCE)	ug/L	21.4	=	4.8	J	4.9	J
1,2-Dichloropropane	ug/L	5	U	5	U	5	U
Bromodichloromethane	ug/L	5	U	5	U	5	U
2-Chloroethyl vinyl ether	ug/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	10	U
Toluene	ug/L	5	U	5	U	5	U
trans-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
1,1,2-Trichloroethane	ug/L	5	U	5	U	5	U
2-Hexanone	ug/L	10	U	10	U	10	U
Tetrachloroethylene (PCE)	ug/L	5	U	5	U	5	U

Analytical Data Summary

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	StationID	A039GP132		A039GP132		A039GP132	
	SampleID	039GP13228		039GP13238		039GP13242	
	DateCollected	11/05/2003		11/05/2003		11/05/2003	
	DateExtracted	11/17/2003		11/17/2003		11/17/2003	
	DateAnalyzed	11/17/2003		11/17/2003		11/17/2003	
	SDGNumber	101335		101335		101335	
Parameter	Units						
Chloromethane	ug/L	10	U	10	U	10	U
Vinyl chloride	ug/L	10	U	4.4	J	9.4	J
Bromomethane	ug/L	10	U	10	U	10	U
Chloroethane	ug/L	10	U	10	U	10	U
1,1-Dichloroethene	ug/L	5	U	5	U	5	U
Acetone	ug/L	15	U	10	U	10	U
Carbon Disulfide	ug/L	5	U	5	U	5	U
Methylene Chloride	ug/L	5	UJ	5	UJ	5	UJ
trans-1,2-Dichloroethene	ug/L	5	U	0.49	J	2.2	J
1,1-Dichloroethane	ug/L	5	U	0.94	J	4	J
Vinyl acetate	ug/L	10	U	10	U	10	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U	10	U	10	U
cis-1,2-Dichloroethylene	ug/L	5	U	48.8	=	239	R
1,2-Dichloroethene (total)	ug/L	5	U	49.2	=	241	R
Chloroform	ug/L	5	U	5	U	5	U
1,1,1-Trichloroethane	ug/L	5	U	5	U	5	U
Carbon Tetrachloride	ug/L	5	U	5	U	5	U
1,2-Dichloroethane	ug/L	5	U	5	U	5	U
Benzene	ug/L	5	U	5	U	0.57	J
Trichloroethylene (TCE)	ug/L	5	U	7.6	=	27.9	=
1,2-Dichloropropane	ug/L	5	U	5	U	5	U
Bromodichloromethane	ug/L	5	U	5	U	5	U
2-Chloroethyl vinyl ether	ug/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U	10	U	10	U
Toluene	ug/L	5	U	5	U	5	U
trans-1,3-Dichloropropene	ug/L	5	U	5	U	5	U
1,1,2-Trichloroethane	ug/L	5	U	5	U	5	U
2-Hexanone	ug/L	10	U	10	U	10	U
Tetrachloroethylene (PCE)	ug/L	5	U	3.4	J	7	=

Analytical Data Summary

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StationID	A039GP132	A039GP132	A039GP132
SampleID	039GP13242DL	039GP13246	039GP13246DL
DateCollected	11/05/2003	11/05/2003	11/05/2003
DateExtracted	11/18/2003	11/17/2003	11/18/2003
DateAnalyzed	11/18/2003	11/17/2003	11/18/2003
SDGNumber	101335	101335	101335

Parameter	Units	A039GP132		A039GP132		A039GP132	
Chloromethane	ug/L	50	R	10	U	50	R
Vinyl chloride	ug/L	9.9	R	15.6	=	16	R
Bromomethane	ug/L	50	R	10	U	50	R
Chloroethane	ug/L	50	R	10	U	50	R
1,1-Dichloroethene	ug/L	25	R	5	U	2.4	R
Acetone	ug/L	50	R	10	U	50	R
Carbon Disulfide	ug/L	25	R	5	U	25	R
Methylene Chloride	ug/L	25	R	5	UJ	25	R
trans-1,2-Dichloroethene	ug/L	2.3	R	3.6	J	3.5	R
1,1-Dichloroethane	ug/L	4.1	R	5.1	=	4.4	R
Vinyl acetate	ug/L	50	R	10	U	50	R
Methyl ethyl ketone (2-Butanone)	ug/L	50	R	10	U	50	R
cis-1,2-Dichloroethylene	ug/L	229	=	301	R	270	=
1,2-Dichloroethene (total)	ug/L	231	=	305	R	274	=
Chloroform	ug/L	25	R	5	U	25	R
1,1,1-Trichloroethane	ug/L	25	R	5	U	25	R
Carbon Tetrachloride	ug/L	25	R	5	U	25	R
1,2-Dichloroethane	ug/L	25	R	5	U	25	R
Benzene	ug/L	25	R	0.76	J	25	R
Trichloroethylene (TCE)	ug/L	27.4	R	51.2	=	50.2	R
1,2-Dichloropropane	ug/L	25	R	5	U	25	R
Bromodichloromethane	ug/L	25	R	5	U	25	R
2-Chloroethyl vinyl ether	ug/L	50	R	10	R	50	R
cis-1,3-Dichloropropene	ug/L	25	R	5	U	25	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	50	R	10	U	50	R
Toluene	ug/L	25	R	5	U	25	R
trans-1,3-Dichloropropene	ug/L	25	R	5	U	25	R
1,1,2-Trichloroethane	ug/L	25	R	5	U	25	R
2-Hexanone	ug/L	50	R	10	U	50	R
Tetrachloroethylene (PCE)	ug/L	7.2	R	20.3	=	20.8	R

Analytical Data Summary

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StationID	A039GP115	A039GP115	A039GP115
SampleID	039GP115-I	039GP115D1	039GP115D2
DateCollected	09/30/2003	09/30/2003	09/30/2003
DateExtracted	10/03/2003	10/03/2003	10/03/2003
DateAnalyzed	10/03/2003	10/03/2003	10/03/2003
SDGNumber	89179	89179	89179

Parameter	Units	A039GP115		A039GP115		A039GP115	
Dibromochloromethane	ug/L	5	U	5	U	5	U
Chlorobenzene	ug/L	5	U	5	U	5	U
Ethylbenzene	ug/L	5	U	5	U	5	U
m+p Xylene	ug/L	5	U	5	U	5	U
o-Xylene	ug/L	5	U	5	U	5	U
Xylenes, Total	ug/L	5	U	5	U	5	U
Styrene	ug/L	5	U	5	U	5	U
Bromoform	ug/L	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	5	U
1,3-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,4-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	5	U
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	5	U

Analytical Data Summary

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StationID	A039GP116		A039GP116		A039GP116		
SampleID	039GP116-I		039GP116D1		039GP116D2		
DateCollected	09/30/2003		09/30/2003		09/30/2003		
DateExtracted	10/03/2003		10/03/2003		10/03/2003		
DateAnalyzed	10/03/2003		10/03/2003		10/03/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Dibromochloromethane	ug/L	5	U	5	U	5	U
Chlorobenzene	ug/L	5	U	5	U	5	U
Ethylbenzene	ug/L	5	U	5	U	5	U
m+p Xylene	ug/L	5	U	5	U	5	U
o-Xylene	ug/L	5	U	5	U	5	U
Xylenes, Total	ug/L	5	U	5	U	5	U
Styrene	ug/L	5	U	5	U	5	U
Bromoform	ug/L	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	5	U
1,3-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,4-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	5	U
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	5	U

Analytical Data Summary

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StationID	A039GP116	A039GP116	A039GP117
SampleID	039GP116D3	039GP116D3DL	039GP117-I
DateCollected	09/30/2003	09/30/2003	10/01/2003
DateExtracted	10/03/2003	10/04/2003	10/03/2003
DateAnalyzed	10/03/2003	10/04/2003	10/03/2003
SDGNumber	89179	89179	89179

Parameter	Units	A039GP116		A039GP117	
Dibromochloromethane	ug/L	5	U	5	U
Chlorobenzene	ug/L	5	U	5	U
Ethylbenzene	ug/L	5	U	5	U
m+p Xylene	ug/L	5	U	5	U
o-Xylene	ug/L	5	U	5	U
Xylenes, Total	ug/L	5	U	5	U
Styrene	ug/L	5	U	5	U
Bromoform	ug/L	5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U
1,3-Dichlorobenzene	ug/L	5	U	5	U
1,4-Dichlorobenzene	ug/L	5	U	5	U
1,2-Dichlorobenzene	ug/L	5	U	5	U
1,2,4-Trichlorobenzene	ug/L	5	U	5	U
1,2,3-Trichlorobenzene	ug/L	5	U	5	U

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP117	A039GP117	A039GP117
SampleID	039GP117-IDL	039GP117D1	039GP117D1DL
DateCollected	10/01/2003	10/01/2003	10/01/2003
DateExtracted	10/04/2003	10/03/2003	10/04/2003
DateAnalyzed	10/04/2003	10/03/2003	10/04/2003
SDGNumber	89179	89179	89179

Parameter	Units	A039GP117		A039GP117		A039GP117	
Dibromochloromethane	ug/L	10	R	5	U	50	R
Chlorobenzene	ug/L	10	R	5	U	50	R
Ethylbenzene	ug/L	10	R	5	U	50	R
m+p Xylene	ug/L	10	R	5	U	50	R
o-Xylene	ug/L	10	R	5	U	50	R
Xylenes, Total	ug/L	10	R	5	U	50	R
Styrene	ug/L	10	R	5	U	50	R
Bromoform	ug/L	10	R	5	U	50	R
1,1,2,2-Tetrachloroethane	ug/L	10	R	5	U	50	R
1,3-Dichlorobenzene	ug/L	10	R	5	U	50	R
1,4-Dichlorobenzene	ug/L	10	R	5	U	50	R
1,2-Dichlorobenzene	ug/L	10	R	5	U	50	R
1,2,4-Trichlorobenzene	ug/L	10	R	5	U	50	R
1,2,3-Trichlorobenzene	ug/L	10	R	5	U	50	R

Analytical Data Summary

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StationID	A039GP117		A039GP117		A039GP117		
SampleID	039GP117D2		039GP117D2DL		039GP117D3		
DateCollected	10/01/2003		10/01/2003		10/01/2003		
DateExtracted	10/03/2003		10/04/2003		10/03/2003		
DateAnalyzed	10/03/2003		10/04/2003		10/03/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Dibromochloromethane	ug/L	5	U	50	R	5	U
Chlorobenzene	ug/L	5	U	50	R	5	U
Ethylbenzene	ug/L	5	U	50	R	5	U
m+p Xylene	ug/L	5	U	50	R	5	U
o-Xylene	ug/L	5	U	50	R	5	U
Xylenes, Total	ug/L	5	U	50	R	5	U
Styrene	ug/L	5	U	50	R	5	U
Bromoform	ug/L	5	U	50	R	5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U	50	R	5	U
1,3-Dichlorobenzene	ug/L	5	U	50	R	5	U
1,4-Dichlorobenzene	ug/L	5	U	50	R	5	U
1,2-Dichlorobenzene	ug/L	5	U	50	R	5	U
1,2,4-Trichlorobenzene	ug/L	5	U	50	R	5	U
1,2,3-Trichlorobenzene	ug/L	5	U	50	R	5	U

Analytical Data Summary

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StationID	A039GP117		A039GP117		A039GP118		
SampleID	039GP117D3DL		039HP117-IDL		039GP118-I		
DateCollected	10/01/2003		10/01/2003		10/01/2003		
DateExtracted	10/04/2003		10/04/2003		10/04/2003		
DateAnalyzed	10/04/2003		10/04/2003		10/04/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Dibromochloromethane	ug/L	50	R	10	R	5	U
Chlorobenzene	ug/L	50	R	10	R	5	U
Ethylbenzene	ug/L	50	R	10	R	5	U
m+p Xylene	ug/L	50	R	10	R	5	U
o-Xylene	ug/L	50	R	10	R	5	U
Xylenes, Total	ug/L	50	R	10	R	5	U
Styrene	ug/L	50	R	10	R	5	U
Bromoform	ug/L	50	R	10	R	5	U
1,1,2,2-Tetrachloroethane	ug/L	50	R	10	R	5	U
1,3-Dichlorobenzene	ug/L	50	R	10	R	5	U
1,4-Dichlorobenzene	ug/L	50	R	10	R	5	U
1,2-Dichlorobenzene	ug/L	50	R	10	R	5	U
1,2,4-Trichlorobenzene	ug/L	50	R	10	R	5	U
1,2,3-Trichlorobenzene	ug/L	50	R	10	R	5	U

Analytical Data Summary

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StationID	A039GP118		A039GP118		A039GP118		
SampleID	039GP118D1		039GP118D1DL		039GP118D2		
DateCollected	10/01/2003		10/01/2003		10/01/2003		
DateExtracted	10/03/2003		10/04/2003		10/03/2003		
DateAnalyzed	10/03/2003		10/04/2003		10/03/2003		
SDGNumber	89179		89179		89179		
Parameter	Units						
Dibromochloromethane	ug/L	5	U	50	R	5	U
Chlorobenzene	ug/L	5	U	50	R	5	U
Ethylbenzene	ug/L	5	U	50	R	5	U
m+p Xylene	ug/L	5	U	50	R	5	U
o-Xylene	ug/L	5	U	50	R	5	U
Xylenes, Total	ug/L	5	U	50	R	5	U
Styrene	ug/L	5	U	50	R	5	U
Bromoform	ug/L	5	U	50	R	5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U	50	R	5	U
1,3-Dichlorobenzene	ug/L	5	U	50	R	5	U
1,4-Dichlorobenzene	ug/L	5	U	50	R	5	U
1,2-Dichlorobenzene	ug/L	5	U	50	R	5	U
1,2,4-Trichlorobenzene	ug/L	5	U	50	R	5	U
1,2,3-Trichlorobenzene	ug/L	5	U	50	R	5	U

Analytical Data Summary

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StationID	A039GP118	A039GP118	A039GP118
SampleID	039GP118D2DL	039GP118D3	039GP118D3DL
DateCollected	10/01/2003	10/01/2003	10/01/2003
DateExtracted	10/04/2003	10/03/2003	10/04/2003
DateAnalyzed	10/04/2003	10/03/2003	10/04/2003
SDGNumber	89179	89179	89179

Parameter	Units	A039GP118		A039GP118		A039GP118	
Dibromochloromethane	ug/L	100	R	5	U	100	R
Chlorobenzene	ug/L	100	R	5	U	100	R
Ethylbenzene	ug/L	100	R	5	U	100	R
m+p Xylene	ug/L	100	R	5	U	100	R
o-Xylene	ug/L	100	R	5	U	100	R
Xylenes, Total	ug/L	100	R	5	U	100	R
Styrene	ug/L	100	R	5	U	100	R
Bromoform	ug/L	100	R	5	U	100	R
1,1,2,2-Tetrachloroethane	ug/L	100	R	5	U	100	R
1,3-Dichlorobenzene	ug/L	100	R	5	U	100	R
1,4-Dichlorobenzene	ug/L	100	R	5	U	100	R
1,2-Dichlorobenzene	ug/L	100	R	5	U	100	R
1,2,4-Trichlorobenzene	ug/L	100	R	5	U	100	R
1,2,3-Trichlorobenzene	ug/L	100	R	5	U	100	R

Analytical Data Summary

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		A039GP119		A039GP119		A039GP119	
		039GP119-I		039GP119D1		039GP119D2	
		10/07/2003		10/07/2003		10/07/2003	
		10/10/2003		10/10/2003		10/10/2003	
		10/10/2003		10/10/2003		10/10/2003	
		89573		89573		89573	
Parameter	Units						
Dibromochloromethane	ug/L	5	UJ	10	U	25	U
Chlorobenzene	ug/L	5	UJ	10	U	25	U
Ethylbenzene	ug/L	5	UJ	10	U	25	U
m+p Xylene	ug/L	5	UJ	10	U	25	U
o-Xylene	ug/L	5	UJ	10	U	25	U
Xylenes, Total	ug/L	5	UJ	10	U	25	U
Styrene	ug/L	5	UJ	10	U	25	U
Bromoform	ug/L	5	UJ	10	U	25	U
1,1,2,2-Tetrachloroethane	ug/L	5	UJ	10	U	25	U
1,3-Dichlorobenzene	ug/L	5	UJ	10	U	25	U
1,4-Dichlorobenzene	ug/L	5	UJ	10	U	25	U
1,2-Dichlorobenzene	ug/L	5	UJ	10	U	25	U
1,2,4-Trichlorobenzene	ug/L	5	UJ	10	U	25	U
1,2,3-Trichlorobenzene	ug/L	5	UJ	10	U	25	U

Analytical Data Summary

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StationID	A039GP119	A039GP119	A039GP120
SampleID	039GP119D2DL	039GP119D3	039GP120-I
DateCollected	10/07/2003	10/07/2003	10/07/2003
DateExtracted	10/09/2003	10/09/2003	10/10/2003
DateAnalyzed	10/09/2003	10/09/2003	10/10/2003
SDGNumber	89573	89573	89573

Parameter	Units	A039GP119		A039GP119		A039GP120	
Dibromochloromethane	ug/L	50	R	50	U	5	U
Chlorobenzene	ug/L	50	R	50	U	5	U
Ethylbenzene	ug/L	50	R	50	U	5	U
m+p Xylene	ug/L	50	R	50	U	5	U
o-Xylene	ug/L	50	R	50	U	5	U
Xylenes, Total	ug/L	50	R	50	U	5	U
Styrene	ug/L	50	R	50	U	5	U
Bromoform	ug/L	50	R	50	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	50	R	50	U	5	U
1,3-Dichlorobenzene	ug/L	50	R	50	U	5	U
1,4-Dichlorobenzene	ug/L	50	R	50	U	5	U
1,2-Dichlorobenzene	ug/L	50	R	50	U	5	U
1,2,4-Trichlorobenzene	ug/L	50	R	50	U	5	U
1,2,3-Trichlorobenzene	ug/L	50	R	50	U	5	U

Analytical Data Summary

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StationID	A039GP120	A039GP120	A039GP120
SampleID	039GP120D1	039GP120D2	039GP120D2DL
DateCollected	10/07/2003	10/07/2003	10/07/2003
DateExtracted	10/10/2003	10/10/2003	10/09/2003
DateAnalyzed	10/10/2003	10/10/2003	10/09/2003
SDGNumber	89573	89573	89573

Parameter	Units	A039GP120		A039GP120		A039GP120	
Dibromochloromethane	ug/L	5	U	5	U	50	R
Chlorobenzene	ug/L	5	U	5	U	50	R
Ethylbenzene	ug/L	5	U	5	U	50	R
m+p Xylene	ug/L	5	U	5	U	50	R
o-Xylene	ug/L	5	U	5	U	50	R
Xylenes, Total	ug/L	5	U	5	U	50	R
Styrene	ug/L	5	U	5	U	50	R
Bromoform	ug/L	5	U	5	U	50	R
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	50	R
1,3-Dichlorobenzene	ug/L	5	U	5	U	50	R
1,4-Dichlorobenzene	ug/L	5	U	5	U	50	R
1,2-Dichlorobenzene	ug/L	5	U	5	U	50	R
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	50	R
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	50	R

Analytical Data Summary

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StationID	A039GP120	A039GP121	A039GP121
SampleID	039GP120D3	039GP121-I	039GP121D1
DateCollected	10/08/2003	10/09/2003	10/09/2003
DateExtracted	10/10/2003	10/16/2003	10/16/2003
DateAnalyzed	10/10/2003	10/16/2003	10/16/2003
SDGNumber	89573	89993	89993

Parameter	Units	A039GP120		A039GP121		A039GP121	
Dibromochloromethane	ug/L	50	U	5	UJ	5	U
Chlorobenzene	ug/L	50	U	5	UJ	5	U
Ethylbenzene	ug/L	50	U	5	UJ	5	U
m+p Xylene	ug/L	50	U	5	UJ	5	U
o-Xylene	ug/L	50	U	5	UJ	5	U
Xylenes, Total	ug/L	50	U	5	UJ	5	U
Styrene	ug/L	50	U	5	UJ	5	U
Bromoform	ug/L	50	U	5	UJ	5	U
1,1,2,2-Tetrachloroethane	ug/L	50	U	5	UJ	5	U
1,3-Dichlorobenzene	ug/L	50	U	5	UJ	5	U
1,4-Dichlorobenzene	ug/L	50	U	5	UJ	5	U
1,2-Dichlorobenzene	ug/L	50	U	5	UJ	5	U
1,2,4-Trichlorobenzene	ug/L	50	U	5	UJ	5	U
1,2,3-Trichlorobenzene	ug/L	50	U	5	UJ	5	U

Analytical Data Summary

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StationID	A039GP121		A039GP121		A039GP121		
SampleID	039GP121D2		039GP121D2DL		039GP121D3		
DateCollected	10/09/2003		10/09/2003		10/09/2003		
DateExtracted	10/16/2003		10/17/2003		10/16/2003		
DateAnalyzed	10/16/2003		10/17/2003		10/16/2003		
SDGNumber	89993		89993		89993		
Parameter	Units						
Dibromochloromethane	ug/L	5	UJ	50	R	5	UJ
Chlorobenzene	ug/L	5	UJ	50	R	5	UJ
Ethylbenzene	ug/L	5	UJ	50	R	5	UJ
m+p Xylene	ug/L	5	UJ	50	R	5	UJ
o-Xylene	ug/L	5	UJ	50	R	5	UJ
Xylenes, Total	ug/L	5	UJ	50	R	5	UJ
Styrene	ug/L	5	UJ	50	R	5	UJ
Bromoform	ug/L	5	UJ	50	R	5	UJ
1,1,2,2-Tetrachloroethane	ug/L	5	UJ	50	R	5	UJ
1,3-Dichlorobenzene	ug/L	5	UJ	50	R	5	UJ
1,4-Dichlorobenzene	ug/L	5	UJ	50	R	5	UJ
1,2-Dichlorobenzene	ug/L	5	UJ	50	R	5	UJ
1,2,4-Trichlorobenzene	ug/L	5	UJ	50	R	5	UJ
1,2,3-Trichlorobenzene	ug/L	5	UJ	50	R	5	UJ

Analytical Data Summary

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	StationID	A039GP121		A039GP122		A039GP122	
	SampleID	039GP121D3DL		039GP122-I		039GP122D1	
	DateCollected	10/09/2003		10/10/2003		10/10/2003	
	DateExtracted	10/17/2003		10/17/2003		10/16/2003	
	DateAnalyzed	10/17/2003		10/17/2003		10/16/2003	
	SDGNumber	89993		89993		89993	
Parameter	Units						
Dibromochloromethane	ug/L	50	R	5	U	5	UJ
Chlorobenzene	ug/L	50	R	5	U	5	UJ
Ethylbenzene	ug/L	50	R	5	U	5	UJ
m+p Xylene	ug/L	50	R	5	U	5	UJ
o-Xylene	ug/L	50	R	5	U	5	UJ
Xylenes, Total	ug/L	50	R	5	U	5	UJ
Styrene	ug/L	50	R	5	U	5	UJ
Bromoform	ug/L	50	R	5	U	5	UJ
1,1,2,2-Tetrachloroethane	ug/L	50	R	5	U	5	UJ
1,3-Dichlorobenzene	ug/L	50	R	5	U	5	UJ
1,4-Dichlorobenzene	ug/L	50	R	5	U	5	UJ
1,2-Dichlorobenzene	ug/L	50	R	5	U	5	UJ
1,2,4-Trichlorobenzene	ug/L	50	R	5	U	5	UJ
1,2,3-Trichlorobenzene	ug/L	50	R	5	U	5	UJ

Analytical Data Summary

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StationID	A039GP122		A039GP122		A039GP123		
SampleID	039GP122D2		039GP122D3		039GP123-D1		
DateCollected	10/10/2003		10/14/2003		10/14/2003		
DateExtracted	10/16/2003		10/16/2003		10/16/2003		
DateAnalyzed	10/16/2003		10/16/2003		10/16/2003		
SDGNumber	89993		89993		89993		
Parameter	Units						
Dibromochloromethane	ug/L	5	U	5	U	5	UJ
Chlorobenzene	ug/L	5	U	5	U	5	UJ
Ethylbenzene	ug/L	5	U	5	U	5	UJ
m+p Xylene	ug/L	5	U	5	U	5	UJ
o-Xylene	ug/L	5	U	5	U	5	UJ
Xylenes, Total	ug/L	5	U	5	U	5	UJ
Styrene	ug/L	5	U	5	U	5	UJ
Bromoform	ug/L	5	U	5	U	5	UJ
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	5	UJ
1,3-Dichlorobenzene	ug/L	5	U	5	U	5	UJ
1,4-Dichlorobenzene	ug/L	5	U	5	U	5	UJ
1,2-Dichlorobenzene	ug/L	5	U	5	U	5	UJ
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	5	UJ
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	5	UJ

Analytical Data Summary

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StationID	A039GP123	A039GP123	A039GP123
SampleID	039GP123-I	039GP123D2	039GP123D3
DateCollected	10/14/2003	10/14/2003	10/14/2003
DateExtracted	10/16/2003	10/16/2003	10/16/2003
DateAnalyzed	10/16/2003	10/16/2003	10/16/2003
SDGNumber	89993	89993	89993

Parameter	Units	A039GP123		A039GP123		A039GP123	
Dibromochloromethane	ug/L	5	UJ	5	U	5	UJ
Chlorobenzene	ug/L	5	UJ	5	U	5	UJ
Ethylbenzene	ug/L	5	UJ	5	U	5	UJ
m+p Xylene	ug/L	5	UJ	5	U	5	UJ
o-Xylene	ug/L	5	UJ	5	U	5	UJ
Xylenes, Total	ug/L	5	UJ	5	U	5	UJ
Styrene	ug/L	5	UJ	5	U	5	UJ
Bromoform	ug/L	5	UJ	5	U	5	UJ
1,1,2,2-Tetrachloroethane	ug/L	5	UJ	5	U	5	UJ
1,3-Dichlorobenzene	ug/L	5	UJ	5	U	5	UJ
1,4-Dichlorobenzene	ug/L	5	UJ	5	U	5	UJ
1,2-Dichlorobenzene	ug/L	5	UJ	5	U	5	UJ
1,2,4-Trichlorobenzene	ug/L	5	UJ	5	U	5	UJ
1,2,3-Trichlorobenzene	ug/L	5	UJ	5	U	5	UJ

Analytical Data Summary

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StationID	A039GP124		A039GP124		A039GP124		
SampleID	039GP124-I		039GP124D1		039GP124D2		
DateCollected	10/14/2003		10/14/2003		10/14/2003		
DateExtracted	10/16/2003		10/16/2003		10/16/2003		
DateAnalyzed	10/16/2003		10/16/2003		10/16/2003		
SDGNumber	89993		89993		89993		
Parameter	Units						
Dibromochloromethane	ug/L	5	UJ	5	U	5	UJ
Chlorobenzene	ug/L	5	UJ	5	U	5	UJ
Ethylbenzene	ug/L	5	UJ	5	U	5	UJ
m+p Xylene	ug/L	5	UJ	5	U	5	UJ
o-Xylene	ug/L	5	UJ	5	U	5	UJ
Xylenes, Total	ug/L	5	UJ	5	U	5	UJ
Styrene	ug/L	5	UJ	5	U	5	UJ
Bromoform	ug/L	5	UJ	5	U	5	UJ
1,1,2,2-Tetrachloroethane	ug/L	5	UJ	5	U	5	UJ
1,3-Dichlorobenzene	ug/L	5	UJ	5	U	5	UJ
1,4-Dichlorobenzene	ug/L	5	UJ	5	U	5	UJ
1,2-Dichlorobenzene	ug/L	5	UJ	5	U	5	UJ
1,2,4-Trichlorobenzene	ug/L	5	UJ	5	U	5	UJ
1,2,3-Trichlorobenzene	ug/L	5	UJ	5	U	5	UJ

Analytical Data Summary

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StationID	A039GP124		A039GP124		A039GP124		
SampleID	039GP124D2DL		039GP124D3		039GP124D3DL		
DateCollected	10/14/2003		10/14/2003		10/14/2003		
DateExtracted	10/17/2003		10/16/2003		10/17/2003		
DateAnalyzed	10/17/2003		10/16/2003		10/17/2003		
SDGNumber	89993		89993		89993		
Parameter	Units						
Dibromochloromethane	ug/L	50	R	5	UJ	50	R
Chlorobenzene	ug/L	50	R	5	UJ	50	R
Ethylbenzene	ug/L	50	R	5	UJ	50	R
m+p Xylene	ug/L	50	R	5	UJ	50	R
o-Xylene	ug/L	50	R	5	UJ	50	R
Xylenes, Total	ug/L	50	R	5	UJ	50	R
Styrene	ug/L	50	R	5	UJ	50	R
Bromoform	ug/L	50	R	5	UJ	50	R
1,1,2,2-Tetrachloroethane	ug/L	50	R	5	UJ	50	R
1,3-Dichlorobenzene	ug/L	50	R	5	UJ	50	R
1,4-Dichlorobenzene	ug/L	50	R	5	UJ	50	R
1,2-Dichlorobenzene	ug/L	50	R	5	UJ	50	R
1,2,4-Trichlorobenzene	ug/L	50	R	5	UJ	50	R
1,2,3-Trichlorobenzene	ug/L	50	R	5	UJ	50	R

Analytical Data Summary

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StationID	A039GP125		A039GP125		A039GP125		
SampleID	039GP125-I		039GP125D1		039GP125D2		
DateCollected	10/15/2003		10/15/2003		10/15/2003		
DateExtracted	10/21/2003		10/20/2003		10/20/2003		
DateAnalyzed	10/21/2003		10/20/2003		10/20/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Dibromochloromethane	ug/L	5	U	5	U	5	UJ
Chlorobenzene	ug/L	5	U	5	U	5	UJ
Ethylbenzene	ug/L	5	U	5	U	5	UJ
m+p Xylene	ug/L	5	U	5	U	5	UJ
o-Xylene	ug/L	5	U	5	U	5	UJ
Xylenes, Total	ug/L	5	U	5	U	5	UJ
Styrene	ug/L	5	U	5	U	5	UJ
Bromoform	ug/L	5	U	5	U	5	UJ
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	5	UJ
1,3-Dichlorobenzene	ug/L	5	U	5	U	5	UJ
1,4-Dichlorobenzene	ug/L	5	U	5	U	5	UJ
1,2-Dichlorobenzene	ug/L	5	U	5	U	5	UJ
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	5	UJ
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	5	UJ

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP125		A039GP125		A039GP125		
SampleID	039GP125D2DL		039GP125D3		039GP125D3DL		
DateCollected	10/15/2003		10/15/2003		10/15/2003		
DateExtracted	10/21/2003		10/20/2003		10/21/2003		
DateAnalyzed	10/21/2003		10/20/2003		10/21/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Dibromochloromethane	ug/L	25	R	5	UJ	50	R
Chlorobenzene	ug/L	25	R	5	UJ	50	R
Ethylbenzene	ug/L	25	R	5	UJ	50	R
m+p Xylene	ug/L	25	R	5	UJ	50	R
o-Xylene	ug/L	25	R	5	UJ	50	R
Xylenes, Total	ug/L	25	R	5	UJ	50	R
Styrene	ug/L	25	R	5	UJ	50	R
Bromoform	ug/L	25	R	5	UJ	50	R
1,1,2,2-Tetrachloroethane	ug/L	25	R	5	UJ	50	R
1,3-Dichlorobenzene	ug/L	25	R	5	UJ	50	R
1,4-Dichlorobenzene	ug/L	25	R	5	UJ	50	R
1,2-Dichlorobenzene	ug/L	25	R	5	UJ	50	R
1,2,4-Trichlorobenzene	ug/L	25	R	5	UJ	50	R
1,2,3-Trichlorobenzene	ug/L	25	R	5	UJ	50	R

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP126		A039GP126		A039GP126	
SampleID	039GP126-I		039GP126D1		039GP126D2	
DateCollected	10/15/2003		10/15/2003		10/15/2003	
DateExtracted	10/21/2003		10/20/2003		10/20/2003	
DateAnalyzed	10/21/2003		10/20/2003		10/20/2003	
SDGNumber	100207		100207		100207	
Parameter	Units					
Dibromochloromethane	ug/L	5	U	5	U	5 UJ
Chlorobenzene	ug/L	5	U	5	U	5 UJ
Ethylbenzene	ug/L	5	U	5	U	5 UJ
m+p Xylene	ug/L	5	U	5	U	5 UJ
o-Xylene	ug/L	5	U	5	U	5 UJ
Xylenes, Total	ug/L	5	U	5	U	5 UJ
Styrene	ug/L	5	U	5	U	5 UJ
Bromoform	ug/L	5	U	5	U	5 UJ
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	5 UJ
1,3-Dichlorobenzene	ug/L	5	U	5	U	5 UJ
1,4-Dichlorobenzene	ug/L	5	U	5	U	5 UJ
1,2-Dichlorobenzene	ug/L	5	U	5	U	5 UJ
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	5 UJ
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	5 UJ

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP126		A039GP126		A039GP126		
SampleID	039GP126D2DL		039GP126D3		039GP126D3DL		
DateCollected	10/15/2003		10/15/2003		10/15/2003		
DateExtracted	10/21/2003		10/20/2003		10/21/2003		
DateAnalyzed	10/21/2003		10/20/2003		10/21/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Dibromochloromethane	ug/L	25	R	5	UJ	25	R
Chlorobenzene	ug/L	25	R	5	UJ	25	R
Ethylbenzene	ug/L	25	R	5	UJ	25	R
m+p Xylene	ug/L	25	R	5	UJ	25	R
o-Xylene	ug/L	25	R	5	UJ	25	R
Xylenes, Total	ug/L	25	R	5	UJ	25	R
Styrene	ug/L	25	R	5	UJ	25	R
Bromoform	ug/L	25	R	5	UJ	25	R
1,1,2,2-Tetrachloroethane	ug/L	25	R	5	UJ	25	R
1,3-Dichlorobenzene	ug/L	25	R	5	UJ	25	R
1,4-Dichlorobenzene	ug/L	25	R	5	UJ	25	R
1,2-Dichlorobenzene	ug/L	25	R	5	UJ	25	R
1,2,4-Trichlorobenzene	ug/L	25	R	5	UJ	25	R
1,2,3-Trichlorobenzene	ug/L	25	R	5	UJ	25	R

Analytical Data Summary

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StationID	A039GP127		A039GP127		A039GP127		
SampleID	039GP127-I		039GP127D1		039GP127D2		
DateCollected	10/15/2003		10/15/2003		10/16/2003		
DateExtracted	10/21/2003		10/21/2003		10/21/2003		
DateAnalyzed	10/21/2003		10/21/2003		10/21/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Dibromochloromethane	ug/L	5	U	5	U	5	U
Chlorobenzene	ug/L	5	U	5	U	5	U
Ethylbenzene	ug/L	5	U	5	U	5	U
m+p Xylene	ug/L	5	U	5	U	5	U
o-Xylene	ug/L	5	U	5	U	5	U
Xylenes, Total	ug/L	5	U	5	U	5	U
Styrene	ug/L	5	U	5	U	5	U
Bromoform	ug/L	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	5	U
1,3-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,4-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	5	U
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	5	U

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP127		A039GP127		A039GP127		
SampleID	039GP127D2DL		039GP127D3		039GP127D3DL		
DateCollected	10/16/2003		10/16/2003		10/16/2003		
DateExtracted	10/22/2003		10/21/2003		10/22/2003		
DateAnalyzed	10/22/2003		10/21/2003		10/22/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Dibromochloromethane	ug/L	50	R	5	U	50	R
Chlorobenzene	ug/L	50	R	5	U	50	R
Ethylbenzene	ug/L	50	R	5	U	50	R
m+p Xylene	ug/L	50	R	5	U	50	R
o-Xylene	ug/L	50	R	5	U	50	R
Xylenes, Total	ug/L	50	R	5	U	50	R
Styrene	ug/L	50	R	5	U	50	R
Bromoform	ug/L	50	R	5	U	50	R
1,1,2,2-Tetrachloroethane	ug/L	50	R	5	U	50	R
1,3-Dichlorobenzene	ug/L	50	R	5	U	50	R
1,4-Dichlorobenzene	ug/L	50	R	5	U	50	R
1,2-Dichlorobenzene	ug/L	50	R	5	U	50	R
1,2,4-Trichlorobenzene	ug/L	50	R	5	U	50	R
1,2,3-Trichlorobenzene	ug/L	50	R	5	U	50	R

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP128		A039GP128		A039GP128	
SampleID	039GP128-I		039GP128D1		039GP128D1DL	
DateCollected	10/16/2003		10/16/2003		10/16/2003	
DateExtracted	10/22/2003		10/21/2003		10/22/2003	
DateAnalyzed	10/22/2003		10/21/2003		10/22/2003	
SDGNumber	100207		100207		100207	
Parameter	Units					
Dibromochloromethane	ug/L	5	U	5	U	25 R
Chlorobenzene	ug/L	5	U	5	U	25 R
Ethylbenzene	ug/L	5	U	5	U	25 R
m+p Xylene	ug/L	5	U	5	U	25 R
o-Xylene	ug/L	5	U	5	U	25 R
Xylenes, Total	ug/L	5	U	5	U	25 R
Styrene	ug/L	5	U	5	U	25 R
Bromoform	ug/L	5	U	5	U	25 R
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	25 R
1,3-Dichlorobenzene	ug/L	5	U	5	U	25 R
1,4-Dichlorobenzene	ug/L	5	U	5	U	25 R
1,2-Dichlorobenzene	ug/L	5	U	5	U	25 R
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	25 R
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	25 R

Analytical Data Summary

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StationID	A039GP128		A039GP128		A039GP128		
SampleID	039GP128D2		039GP128D2DL		039GP128D3		
DateCollected	10/16/2003		10/16/2003		10/16/2003		
DateExtracted	10/20/2003		10/21/2003		10/20/2003		
DateAnalyzed	10/20/2003		10/21/2003		10/20/2003		
SDGNumber	100207		100207		100207		
Parameter	Units						
Dibromochloromethane	ug/L	5	UJ	50	R	5	UJ
Chlorobenzene	ug/L	5	UJ	50	R	5	UJ
Ethylbenzene	ug/L	5	UJ	50	R	5	UJ
m+p Xylene	ug/L	5	UJ	50	R	5	UJ
o-Xylene	ug/L	5	UJ	50	R	5	UJ
Xylenes, Total	ug/L	5	UJ	50	R	5	UJ
Styrene	ug/L	5	UJ	50	R	5	UJ
Bromoform	ug/L	5	UJ	50	R	5	UJ
1,1,2,2-Tetrachloroethane	ug/L	5	UJ	50	R	5	UJ
1,3-Dichlorobenzene	ug/L	5	UJ	50	R	5	UJ
1,4-Dichlorobenzene	ug/L	5	UJ	50	R	5	UJ
1,2-Dichlorobenzene	ug/L	5	UJ	50	R	5	UJ
1,2,4-Trichlorobenzene	ug/L	5	UJ	50	R	5	UJ
1,2,3-Trichlorobenzene	ug/L	5	UJ	50	R	5	UJ

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP128		A039GP129		A039GP129		
SampleID	039GP128D3DL		039GP12928		039GP12938		
DateCollected	10/16/2003		11/04/2003		11/04/2003		
DateExtracted	10/21/2003		11/17/2003		11/18/2003		
DateAnalyzed	10/21/2003		11/17/2003		11/18/2003		
SDGNumber	100207		101335		101335		
Parameter	Units						
Dibromochloromethane	ug/L	50	R	5	U	5	U
Chlorobenzene	ug/L	50	R	5	U	5	U
Ethylbenzene	ug/L	50	R	5	U	5	U
m+p Xylene	ug/L	50	R	5	U	5	U
o-Xylene	ug/L	50	R	5	U	5	U
Xylenes, Total	ug/L	50	R	5	U	5	U
Styrene	ug/L	50	R	5	U	5	U
Bromoform	ug/L	50	R	5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	50	R	5	U	5	U
1,3-Dichlorobenzene	ug/L	50	R	5	U	5	U
1,4-Dichlorobenzene	ug/L	50	R	5	U	5	U
1,2-Dichlorobenzene	ug/L	50	R	5	U	5	U
1,2,4-Trichlorobenzene	ug/L	50	R	5	U	5	U
1,2,3-Trichlorobenzene	ug/L	50	R	5	U	5	U

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP129		A039GP129		A039GP129		
SampleID	039GP12942		039GP12942DL		039GP12946		
DateCollected	11/04/2003		11/04/2003		11/04/2003		
DateExtracted	11/18/2003		11/18/2003		11/17/2003		
DateAnalyzed	11/18/2003		11/18/2003		11/17/2003		
SDGNumber	101335		101335		101335		
Parameter	Units						
Dibromochloromethane	ug/L	5	U	25	R	5	U
Chlorobenzene	ug/L	5	U	25	R	5	U
Ethylbenzene	ug/L	5	U	25	R	5	U
m+p Xylene	ug/L	5	U	25	R	5	U
o-Xylene	ug/L	5	U	25	R	5	U
Xylenes, Total	ug/L	5	U	25	R	5	U
Styrene	ug/L	5	U	25	R	5	U
Bromoform	ug/L	5	U	25	R	5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U	25	R	5	U
1,3-Dichlorobenzene	ug/L	5	U	25	R	5	U
1,4-Dichlorobenzene	ug/L	5	U	25	R	5	U
1,2-Dichlorobenzene	ug/L	5	U	25	R	5	U
1,2,4-Trichlorobenzene	ug/L	5	U	25	R	5	U
1,2,3-Trichlorobenzene	ug/L	5	U	25	R	5	U

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP129	A039GP130	A039GP130
SampleID	039GP12946DL	039GP13028	039GP13038
DateCollected	11/04/2003	11/04/2003	11/04/2003
DateExtracted	11/18/2003	11/18/2003	11/17/2003
DateAnalyzed	11/18/2003	11/18/2003	11/17/2003
SDGNumber	101335	101335	101335

Parameter	Units	A039GP129		A039GP130		A039GP130	
Dibromochloromethane	ug/L	25	R	5	U	5	U
Chlorobenzene	ug/L	25	R	5	U	5	U
Ethylbenzene	ug/L	25	R	5	U	5	U
m+p Xylene	ug/L	25	R	5	U	5	U
o-Xylene	ug/L	25	R	5	U	5	U
Xylenes, Total	ug/L	25	R	5	U	5	U
Styrene	ug/L	25	R	5	U	5	U
Bromoform	ug/L	25	R	5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	25	R	5	U	5	U
1,3-Dichlorobenzene	ug/L	25	R	5	U	5	U
1,4-Dichlorobenzene	ug/L	25	R	5	U	5	U
1,2-Dichlorobenzene	ug/L	25	R	5	U	5	U
1,2,4-Trichlorobenzene	ug/L	25	R	5	U	5	U
1,2,3-Trichlorobenzene	ug/L	25	R	5	U	5	U

Analytical Data Summary

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StationID	A039GP130		A039GP130		A039GP131		
SampleID	039GP13042		039GP13046		039GP13128		
DateCollected	11/04/2003		11/04/2003		11/04/2003		
DateExtracted	11/17/2003		11/17/2003		11/17/2003		
DateAnalyzed	11/17/2003		11/17/2003		11/17/2003		
SDGNumber	101335		101335		101335		
Parameter	Units						
Dibromochloromethane	ug/L	5	U	5	U	5	U
Chlorobenzene	ug/L	5	U	5	U	5	U
Ethylbenzene	ug/L	5	U	5	U	5	U
m+p Xylene	ug/L	5	U	5	U	5	U
o-Xylene	ug/L	5	U	5	U	5	U
Xylenes, Total	ug/L	5	U	5	U	5	U
Styrene	ug/L	5	U	5	U	5	U
Bromoform	ug/L	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	5	U
1,3-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,4-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	5	U
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	5	U

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP131		A039GP131		A039GP131		
SampleID	039GP13138		039GP13142		039GP13146		
DateCollected	11/04/2003		11/04/2003		11/04/2003		
DateExtracted	11/17/2003		11/17/2003		11/17/2003		
DateAnalyzed	11/17/2003		11/17/2003		11/17/2003		
SDGNumber	101335		101335		101335		
Parameter	Units						
Dibromochloromethane	ug/L	5	U	5	U	5	U
Chlorobenzene	ug/L	5	U	5	U	5	U
Ethylbenzene	ug/L	5	U	5	U	5	U
m+p Xylene	ug/L	5	U	5	U	5	U
o-Xylene	ug/L	5	U	5	U	5	U
Xylenes, Total	ug/L	5	U	5	U	5	U
Styrene	ug/L	5	U	5	U	5	U
Bromoform	ug/L	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	5	U
1,3-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,4-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	5	U
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	5	U

Analytical Data Summary

03/24/2004 11:19 AM

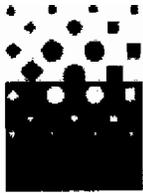
StationID	A039GP132		A039GP132		A039GP132		
SampleID	039GP13228		039GP13238		039GP13242		
DateCollected	11/05/2003		11/05/2003		11/05/2003		
DateExtracted	11/17/2003		11/17/2003		11/17/2003		
DateAnalyzed	11/17/2003		11/17/2003		11/17/2003		
SDGNumber	101335		101335		101335		
Parameter	Units						
Dibromochloromethane	ug/L	5	U	5	U	5	U
Chlorobenzene	ug/L	5	U	5	U	5	U
Ethylbenzene	ug/L	5	U	5	U	5	U
m+p Xylene	ug/L	5	U	5	U	5	U
o-Xylene	ug/L	5	U	5	U	5	U
Xylenes, Total	ug/L	5	U	5	U	5	U
Styrene	ug/L	5	U	5	U	5	U
Bromoform	ug/L	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U	5	U	5	U
1,3-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,4-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,2,4-Trichlorobenzene	ug/L	5	U	5	U	5	U
1,2,3-Trichlorobenzene	ug/L	5	U	5	U	5	U

Analytical Data Summary

03/24/2004 11:19 AM

StationID	A039GP132	A039GP132	A039GP132
SampleID	039GP13242DL	039GP13246	039GP13246DL
DateCollected	11/05/2003	11/05/2003	11/05/2003
DateExtracted	11/18/2003	11/17/2003	11/18/2003
DateAnalyzed	11/18/2003	11/17/2003	11/18/2003
SDGNumber	101335	101335	101335

Parameter	Units						
Dibromochloromethane	ug/L	25	R	5	U	25	R
Chlorobenzene	ug/L	25	R	5	U	25	R
Ethylbenzene	ug/L	25	R	5	U	25	R
m+p Xylene	ug/L	25	R	5	U	25	R
o-Xylene	ug/L	25	R	5	U	25	R
Xylenes, Total	ug/L	25	R	5	U	25	R
Styrene	ug/L	25	R	5	U	25	R
Bromoform	ug/L	25	R	5	U	25	R
1,1,2,2-Tetrachloroethane	ug/L	25	R	5	U	25	R
1,3-Dichlorobenzene	ug/L	25	R	5	U	25	R
1,4-Dichlorobenzene	ug/L	25	R	5	U	25	R
1,2-Dichlorobenzene	ug/L	25	R	5	U	25	R
1,2,4-Trichlorobenzene	ug/L	25	R	5	U	25	R
1,2,3-Trichlorobenzene	ug/L	25	R	5	U	25	R



ARS Technologies Inc.

114 North Ward Street
New Brunswick, New Jersey
732.296.6620

Materials Safety Data Sheet

Section 1 - Identity:

H-200

Section 2 - Hazardous Ingredients:

MATERIAL (CAS REGISTRY NO.)	IRON (7439-89-6)
PERCENTAGE	97.0 +
OSHA PEL (TWA)	5 mg/m ³ as nuisance particulates

Section 3 - Physical/Chemical Data

Melting Point: 2798°F (1536°C)
Density: 7.8 g/cm³
Appearance: Light to dark gray color. Fine powder. No odor.

Section 4 - Fire/Explosion Hazard Data:

Iron is not considered flammable under most conditions. Avoid airborne dispersion of any finely divided powder in an enclosed area to reduce potential for dust ignition.

Extinguish media: Dry chemical, sand, graphite to smother fire. Use water only in mist/fog application to avoid spreading powder/acclimated dust in surrounding areas.

Section 5-Reactivity Data:

Stability: Normally stable.
Conditions to avoid: Generation of airborne dust
Incompatibility (Materials to avoid): Pure oxygen or other strong oxidizers
Hazardous decomposition products: None
Hazardous polymerization: Will not occur

Section 6 - Health Hazard Data:

This material is not considered to be carcinogenic by IARC, NTP, or OSHA

Inhalation: Prolonged overexposure to iron dusts may cause a chronic health condition of siderosis which is a benign pneumoconiosis with few or no symptoms.
Skin: Exposure may cause mild irritation. Wash with soap and water. Seek medical attention if irritation persists.
Eyes: Flush thoroughly with water for at least 15 minutes to avoid abrasive damage to outer surfaces of eye. Seek medical attention if irritation persists.
Ingestion: Unlikely. Low oral toxicity. No acute or chronic health effects known.

Section 7 – Precautions for Safe Handling and use:

Keep in closed containers. Do not store near strong oxidizers. Use good housekeeping practices to prevent accumulation of dust. In the event of a spill, recommend use of a vacuum with a HEPA filter; use dust suppressant when sweeping. Avoid creation of any dust during cleanup. Reuse all spilled material whenever possible. Prevent spills from entering storm sewers or drains and contact with soil. Dispose of waste material at an appropriate waste disposal facility in accordance with current federal, state and local laws and regulations.

Section 8 – Control Measures:

- Respiratory Protection:** Use adequate ventilation to maintain airborne particulate levels below the recommended exposure limits. Use NIOSH-approved respirators in accordance with 29 CFR 1910.134 where levels exceed exposure limits.
- Skin Protection:** Use of a barrier cream and/or gloves by employees with skin sensitivity to this material is recommended.
- Eye Protection:** Wear safety glasses or goggles when handling this material to prevent eye contact. Do not wear contact lenses in any environment where dust or fumes are present. Readily available eye baths are recommended in areas where operations may produce dusts.

Section 9 – Regulatory Information

This product contains no chemicals reportable under the SARA 313 toxic release program.

Section 10 – Additional Information

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for his or her particular purpose(s).